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The Nut-Grower

Volume XIV

January, 1915

Number 1



If things don't just seem to suit you,
And the world seems kinder wrong,
What's the matter with your boostin'
Just to help the thing along?
'Cause if things should stop a-goin',
We'd be in a sorry plight.
Just keep that horn a-blowin'---
Boost 'er up with all your might.

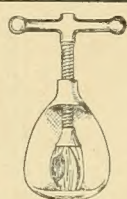
If you know some fellow's failin's,
Just forget 'em, 'cause you know
That same fellow has some good points---
Them's the ones you want to show.
"Cast your loaves out on the waters,
They'll come back," a saying true;
Mebbe, too, they'll come back buttered
When some fellow boosts for you.
---Brush and Pail.

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THE NUT-GROWER

Items of Interest

The hazel nut is said to be fast disappearing in the Ozark region.

B. W. Stone, chairman of the committee to arrange for a nut exhibit at the Panama-Pacific Exposition, is making good progress.

At Dallas, Tex., an Oliver pecan bud was set Sept. 9, 1911, and on Oct. 9, 1914, three and a half pounds of nuts were gathered from the resultant limb.

The Georgia State College of Agriculture, through its adjunct professor of horticulture, is compiling data regarding the pecan varieties supposed to be most suitable for that state.

Purdue University, at Lafayette, Ind., has organized a course in practical forestry. **THE NUT-GROWER** is one of the periodicals which go regularly to the library of this institution of learning.

The Dupont Powder Company has established at Albany, Ga., a dynamite and supply magazine so as to give better service to the pecan growing trade. The magazine is stocked with their farm powder and 40 and 60 per cent dynamite.

The Chicago Record's Christmas Ship for the children of Europe was given an enthusiastic lift in contributions of Texas pecans. The Houston Post, Fort Worth Star-Telegram and many other Texas papers lent efficient assistance to the movement.

Several negro boys in Muscogee, Okla., did a thriving business in selling pecans to retail dealers in that city. Later it developed that the nuts were stolen from a warehouse and the merchants had to submit to a confiscation of their purchases or be liable to prosecution for receiving stolen goods.

Calhoun county, Mich., is actively engaged in planting fruit trees along the public highways. One hundred and twelve miles of state reward road is being cared for by road repair gangs. It is believed that the trees will protect the roads from washout, provide shade and beauty and produce revenue.

Pecan Literature

The increasing demand for information regarding pecans prompts the publication of the following list of publications, which we can furnish at prices named.

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 50c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

The Nut-Grower
WAYCROSS :: GEORGIA

THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., JANUARY 1915

NUMBER 1

THE PRESIDENT'S ADDRESS

BY CHARLES A. VAN DUZEE

Delivered at the Thomasville Convention of the National Nut Growers' Association

IN the preparation of our program for this meeting, and especially during the past few weeks, the thought has been impressed upon me that, of all the various methods by which men endeavor to win success in life, we, as nut growers, are blessed with a vocation that offers more of stability, safety and attractiveness than falls to the lot of most others.

At this time, when the world is torn by the conflict of nations, and the business of our own country is struggling to meet the abnormal situation, and with the uncertainty as to the planting of crops which may be needed or profitable for another season, we find ourselves established securely within the shelter of our nut orchards. Ours is a business that does not talter, and we are justified in our faith that the harvest will occur, each season with the regularity that marks the rising of the sun.

There may be fluctuations in our income, caused by the folly of the world at large or the variableness of the seasons, but when nature fails to set a bountiful crop of nuts, she usually compensates by added tree growth, and we are filled with hope that the next year will more than make up for the temporary shortage; when financial disturbances affect our market, we may assume, with reasonable assurance, that the constantly increasing crop of nuts will surely overcome this factor, even if the pendulum does not quite reach its position in the backward swing.

Over all these things, and running constantly in my mind, is the thought that our orchards are established; that they will endure, and shelter, protect and provide for us in sickness or in health, through all the years.

We have gathered here for a purpose, and, while conditions may prevent some of our members from being with us, our work will go on; we are making and recording the history of nut culture in America; we are attending to the business of gathering the knowledge which develops in the individual, and placing it at the disposal of all the others; we will

consider the influences which may work for the common good; and combine our resources to combat the things that may threaten the welfare of our chosen industry.

The uncertainty of the past is being overcome, and with each year of progress our pathway becomes more safe from danger, and more filled with satisfaction and pleasure.

Today, in spite of conditions which are disturbing every industry, we find a full measure of contributions from the foremost workers in our field, to make for the success of this meeting, and to insure the continued progress of our work.

These contributions cover so wide a field, and are of such individual importance and value, that it seems best for me to refrain from even a brief reference to each one, and yet, I may be pardoned for touching upon a few that will require our immediate action, if we are to avoid the loss of valuable time.

Your Committee on Marketing is unfortunate in being called upon for some strenuous work at such a time, and has been handicapped in its attempts to secure the attention of the business world, by the general feeling of uncertainty and unrest.

Knowing the difficulty of obtaining best results under such circumstances, they have devoted rather more time and energy to the general fundamental principles, and will offer you the opportunity to assist them by a consideration of constructive matters which can be carried forward during the coming year.

The time has arrived when our attention must be fixed upon the selection of varieties for commercial planting, and future demands must be given careful consideration.

The varieties we have been planting promise to fully supply the demand for choice table nuts, and yet there is a very attractive field in the search for better varieties for this purpose, and in the improvement of those we now have, but we must not delude ourselves into the belief that these varieties are best

suited for the trade in excess of this class, for it is a generally accepted fact that some of our choicest nuts are not suited to meet the requirements of the cracking trade.

The growing demand for the shelled meats would seem to indicate that from now on we should plant with more reference to supplying this need, for this field will not fail us for many years to come, and to it must go all the surplus from the other orchards.

The nut best adapted to meet the approval of the crackers may not be as attractive as to size, thinness of shell and general appearance as those we are growing for table use but when the tonnage passes the requirements of the fancy trade, the nut must stand or fall upon its merits as a cracking proposition.

A tree that is vigorous, healthy and self-reliant, and one that bears large annual crops of good cracking nuts may prove of infinitely greater value as a revenue producer. We are fortunate that there is some history as to varieties and their behavior under different conditions to guide us.

There is another important matter which must be considered and disposed of. It relates to the manner in which the business of all the nut growers shall be carried forward.

In the infancy of an industry, there is usually found a sufficient number of enthusiasts to solve its problems and carry forward its work without compensation, but as the industry reaches a point where it becomes a factor in the business world, the individual must give way to organization.

When the tonnage becomes large enough to attract the traders, with their avarice and their machinery, they will not fail to appear, and, unless organization protects the industry, it is apt to be the victim.

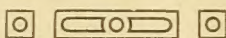
The walnut growers of the West are fully justified in spending a hundred thousand dollars each year in marketing their crop, for they are organized along good lines; the Guggenheims are warranted, and do pay salaries to individual men of as much or more, for their business requires such service and would fail without it.

Today, the nut growers of the country east of California are unorganized, and they offer a promising field for exploitation by that class of people who prey upon infant industries.

We have nothing to fear from the regularly organized channels of distribution, beyond the fact that we must look after our own end of the operation, but to accomplish this, I believe the time has come to employ salaried men in the perfection of organization and the transaction of our business.

With such machinery in working order, we may find ample room for growth, and in affiliation with the western growers there will be the opportunity for mutual advantage impossible under present conditions.


I trust that our deliberations may be harmonious and earnest; that each member may give freely of his counsel and experience, and that the published record of our proceedings may constitute a valuable addition to the history of nut growing.



SERIOUS DISEASES OF THE PECAN

By S. M. McMURRAN

A Paper read at the Thomasville meeting of the National Nut Growers' Association

 I WANT to say, by way of explanation, that I am only partly responsible for the title of this talk tonight. I accepted it as it was handed to me and to that extent am responsible, but no further. It assumes too much. It says "Serious Diseases" as if that were an assured fact, so we might look into this for a few moments.

Diseases are serious in proportion to the loss they entail, for one thing, but there is another factor to be considered, the ease or facility with which they may be controlled.

The scab fungus immediately suggests itself to you as the cause of a serious disease, and there is no doubt but that it causes considerable loss. On the other hand, you have two courses open for its control. Spraying is reasonably effective and you may top-work your trees to scab resistant varieties.

Rosette also suggests itself to you as being a serious disease. Well, it is, and let me say here that I have no remedy for rosette and do not know the cause of it. We hope to find these things out, but we do not know them now. You have all, no doubt, heard of various remedies. There are almost as many proposed remedies as there are cases. The trouble with them is that they all fail in as many or more cases than they help. There is no theory that has been advanced as to its cause that cannot be apparently contradicted by many cases. One fact seems to stand out with reasonable clearness, however, and this is that, with the exception of occasional spots here and there, it is by no means a serious factor in those groves which receive the best of care and attention. At any rate this is the opinion of many owners of excellent groves and my observations in

traveling over two thousand miles of the pecan country during this season has tended to confirm this.

Looking at the matter broadly, neglected trees, starved trees, may be considered diseased. They are certainly abnormal as compared with thrifty, vigorously growing trees. The remedy for this is so obvious that we may as well pass it.

What else have we? A dropping of the nuts in some seasons? Yes, but until we can control the weather we shall always have this in some seasons, so this may be dismissed.

And now what else? A spotting of the nuts and a little loss due to the anthracnose fungus perhaps. A little spotting of the leaves late in the season after their vigor has begun to be depleted on the completion of growth of the trunk and roots. An occasional spot on the kernel of some nuts which may be due to a fungus, a fungus leaf blight on seedling nursery stock which may be readily controlled by spraying with bordeaux, and certain diseases like crown gall, wood rot and root rot fungi and physiological troubles common to all forest and cultivated trees complete the list; and further than this I am unable to enumerate.


It is evident that while local damage may result in certain cases, there is no serious menace to the industry from any of these things.

Of the foregoing, I have been forced to conclude that by far the most serious and fundamental at the present time is lack of care in building up the fertility of the soil, lack of good farming. I have seen many cases during the past summer that practically force the conclusion that the pecan is almost if not quite as susceptible to good care as is the peach. More than this cannot be said, and if there is one word that I would leave with you tonight it is that the big majority of the pecan orchards need more care. They need more cultivation; they need more legumes, both winter and summer legumes, and these legumes need to be turned under, not removed and a little stubble and roots plowed in. I believe if this system is persistently followed from year to year, coupled with the judicious use of lime and mineral fertilizers in small or large amounts when needed, these other troubles will be of minor importance in most cases.

Note—These remarks were followed by a series of twenty-five lantern slides showing the characteristic features of the various pecan troubles referred to.



ROSETTE IN PECANS

 THE newspapers have stated in the last few years that Edison has said, no one knows one billionth part of one percent, about anything.

The bulletin lately published on pecan rosette, by the national Government, proves it. After years of careful study and many elaborate tests the authors

of this bulletin honestly admit they do not know what causes it, nor what will cure or prevent it. I have had for my constant companions for the last 36 years pecan trees, and while I am no bacteriologist nor entomologist, I have a little common sense, and can shed a little light on this subject.

Six years ago I made the statement before the National Nut Growers' convention that rosette was caused by some bacterial growth upon the roots of the tree. Prof. Gossard said that I was wrong. Upon my return home I at once began to study rosette, and after six years' study I have proved beyond a shadow of a doubt that I was wrong and Prof. Gossard was right. The most complete refutation of any theory is this. A physician lecturing before a popular audience said that every case of grippe originated from wet feet. A man in the audience interrupted him and said, "You are wrong, sir, for I have two wooden legs, and have just got well from a very bad case of the grippe." Now I have just as positive a proof that rosette is not caused by any growth upon the roots of the tree. It is this. The common wild pecan of Louisiana never suffers from rosette. Yet when the Schley pecan is budded or grafted upon the wild roots they frequently die of rosette.

There is one bold mis-statement of fact in the Government's bulletin which I wish to correct: that swamp land is entirely exempt from rosette. My groves, which are situated upon swamp lands, have developed several cases of rosette. I have never known a case among my nursery trees.

Now I wish to tell of a few things that I have found out about rosette. The disease is inherent in certain varieties of pecans, and is very similar to locomotor ataxia in the human species. It is not a germ disease at all. It is the lack of sufficient nutrition. Certain varieties have not strong enough digestive organs to assimilate the food under ordinary conditions. Here with me certain varieties are very subject to rosette, and other varieties never have it at all. They Schley trees nearly all die of it, except under high cultivation. Moneymaker never shows any sign of it. Russell often develops it, while Carmen never does. The common wild pecan of Louisiana never shows a trace of it. Now notice this fact strongly. While the Schley nearly always dies when not properly cultivated, still when very highly cultivated it shows no sign of rosette, and I feel sure that when scientists get at the bottom of the matter they will see as plainly as I do that rosette is a failure of the pecan to digest its food properly. Certain varieties are naturally dyspeptics.

—SAM. H. JAMES in Rural New Yorker.



A 23-acre pecan orchard planted in 1909 near Tifton, Ga., is reported as having produced 650 pounds of nuts the past season.

The Nut-Grower

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Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

A Correction

In Mr. W. W. Carroll's paper, "Mistakes of the Last Ten Years," which appeared in our December number a word which was not in the copy was in some way inadvertently inserted, changing the sense of a sentence. In the phrase "and no more than 35 per cent commission to salesmen," the word *than* should not have appeared. Mr. Carroll calls our attention to the mistake and we gladly make the correction.

◇ ◇ ◇

Mrs. M. R. Buchanan, of Brandon, Miss., remembered THE NUT-GROWER at Christmas time with a box of sugared nut meats.

◇ ◇ ◇

January 21 is Arbor Day in Mississippi and the planting of a pecan tree in every one of the 9,000 school yards of the state will be a feature of the occasion. The pecan tree was selected because it is long-lived, gives excellent shade and furnishes an economic lesson.

◇ ◇ ◇

Occasionally the labels on NUT-GROWER wrappers are rubbed off in the mails, so that delivery cannot be made. These copies are returned to us, but there is no way to determine to whom they belong. Subscribers are requested to notify us when copies fail to reach them, so that we can duplicate the missing numbers.

◇ ◇ ◇

Thus far THE NUT-GROWER has been largely devoted to orchard planting and the development of the industry. Such phenomenal success has been achieved in the production of high grade pecans that the serious problem of marketing them in competition with the seedling nuts becomes of paramount importance. This problem—now a condition, not a

theory—will receive considerable attention in our columns during the coming year.

◇ ◇ ◇

Large bodies move slowly, which may account in part for the delay in getting plans formulated by the National Nut Growers' Association and the Georgia-Florida Pecan Growers' Association into operation for marketing pecans. Some of the producers are having experiences which indicate that the time for organized marketing is already at hand.

◇ ◇ ◇

Carlot shipments of pecans from the Albany (Ga.) district are becoming common. A few days ago a car was loaded with 17,000 pounds of nuts from a single grove at Baconton, and this was less than a fourth of the crop from that particular orchard. As a car of these high grade nuts brings close to \$10,000, it looks like the pecan business is fully up to what THE NUT-GROWER has claimed for it for the past twelve years.

◇ ◇ ◇

The soil is the great reservoir from which our agricultural supplies are obtained. With the ordinary farm crops of grain and forage only a few inches of surface soil are utilized. With fruit and nut bearing trees, which have the element of permanency to a greater or less extent, the roots penetrate the equally rich sub-soil, especially so when explosives have been used in preparing the land. What we need is an era of tree farming on scientific principles to supplement the annual grain production.

◇ ◇ ◇

In the pecan business, especially where the farmer and orchardist is concerned, there are two essentials which obtain—producing and selling. The first involves the growing of nuts of high quality, then the grading, packing and loading according to established methods. When this is properly done the producer's operations are transferred to the second essential, which aims to market the crop to the best advantage. If the first essential is well attended to, the second should not prove to be very difficult.

◇ ◇ ◇

The time is coming, and we trust is near at hand, when the same study and scientific investigation that is now being bestowed upon live stock and grain crops will be given to food producing trees, other than ordinary fruit trees. In these agricultural lines, scientific breeding has wonderfully improved the quality as well as the quantity of these products. The natural nut bearing trees of our great country afford the same, if not greater opportunities for improvement. This is a vital element in the future food supply for the increasing millions who will inhabit this land in future generations.

THE USE OF NUTS

Compiled by Mrs. T. A. Banning and other ladies under the auspices of the National Nut Growers' Association.

One hundred and sixteen practical recipes for the use of Nuts. Introduction by Mrs. Harriet North

Foreword by Mrs. W. N. Hutt

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WITH THE EDITOR AND HIS CORRESPONDENTS

Decreasing Crops

Editor NUT-GROWER:

I wish some assistance or advice about my pecan orchard, as my trees are not bearing as they should. I can't tell what is the matter, and to give an intelligent conception of their condition I will tell how I have managed them.

I had some ten acres in Stuart, Pabst, Russell, Schley, Teche, trees all confined to rows of each variety. From their first beginning to bear, I cultivated cotton in this orchard, close up to the trees, manuring the same at from 800 to 1000 pounds of fertilizer per acre. After they began to bear well, I gave extra fertilization around the trees. I made one and a half bales of cotton to the acre on this and until the trees became so large that I felt it shaded the cotton too much and concluded to give the land entirely up to the trees. Before I did this let me say that in 1911 I gathered 2,500 pounds of nuts from my trees. The next year, 1912, I got only 2,000 pounds of nuts. In 1913 I planted the land in oats and followed that crop with a fine crop of cowpeas sowed broadcast. I cut the peas off the land for hay, having the cutter-bar of my mower raised pretty high so as to leave a heavy stubble, which I plowed under as a fertilizer to the trees, adding humus to the soil. That fall, after turning under this pea stubble, I sowed 20 pounds of hairy vetch to the acre, inoculating the vetch seed to insure a stand and previously sowing one bushel of oats to the acre to hold up the vetch so I could mow it off for hay. I secured a fine stand and the vetch grew waist high. I cut this off and received a fine crop of hay and oats mixed. I turned under a fine sward and planted soja beans on

the land, inoculating them. Got a fine crop of this growing waist high, turned under this stubble—a fine one—and reseeded it to vetch. The land was full of nodules, showing the legumes had drawn ammonia heavily from the air, and full of humus.

I neglected to say that before sowing oats and vetch in the spring of 1914 I broad-cast over the land one ton of lime to the acre for the benefit of the trees.

Now let me go back and state that in the fall of 1913 I gathered only 550 pounds of nuts, and they came off of two acres adjoining that had come into bearing. On the same twelve acres this year I will hardly gather more than 300 or 400 pounds of nuts.

To say that I am greatly discouraged after all my treatment of the trees and land is putting it lightly. The past two years have been very dry, but this spring my trees bloomed very heavily and I expected a fine crop from my treatment and the increased age of my trees, now 15 years old.

I neglected to say in the proper place that in the spring of 1913 I broadcast upon the land 1000 pounds of Thomas phosphate to the acre.

My trees have grown well and have no disease—just don't bear. I can't tell what is the matter. I am getting disgusted with the whole pecan business. I should at least have gotten this year from 6,000 to 10,000 pounds of nuts.

If any of your readers can tell me where my trouble lies, what mistakes, if any, I have made, I shall greatly appreciate it. I fully intended to go to the Thomasville convention, compare notes and get help if any could give it, but with so poor a crop of nuts and the great war making cotton

so cheap, I had to forego that pleasure. It was all I could do to hold my cotton and stay at home and live.

CHAS. CROSSLAND.

Bennettsville, S. C.

[Mr. Crossland is evidently a good farmer and knows how to enrich his land. His history of the orchard is most interesting and we will be glad to publish any replies to his letter which will throw light upon his problem.

Two things occur to us which may bear on the subject:

1. Mr. Crossland speaks of the fine growth the trees are making. It is generally understood that nut crops are most abundant when the wood production is held in abeyance and large yields of nuts and rapid growth of the trees can hardly be expected at the same time. The cultivation given the trees would, to some extent at least, tend to confirm this opinion.

2. The dry weather mentioned would also have considerable effect in cutting down the crop.

A more recent letter from Mr. Crossland states that his 1914 crop was double the amount of the estimate made above.—EDITOR.]



Trees are Blighting

Editor NUT-GROWER:

Can you suggest the cause and prescribe the remedy? My 6 year pecans of the Stuart variety are badly blighted and affected with rosette (?). They appear to be yellow, sickly, die at end of twigs and bunch at end of twigs. Do you think cutting back and budding to Schleys or Mobiles would remedy?

When should bearing trees be fertilized? With what, and how much for six year trees?

W. W. WATSON.

Orangeburg, S. C.

[These trees seem to be suffering from a complication of diseases. It is a question as to how much of the trouble may be due to rosette. We have referred the part of the letter dealing with this

subject to S. M. McMurran of the Bureau of Plant Industry, who is now located at Thomasville, Ga., and will publish his reply when received.

It is doubtful if the trees would be benefitted by working to Schley or Mobile, as both these varieties are as susceptible to rosette as is the Stuart, and are even more liable to scab.

For bearing trees a fertilizer rich in potash is required. One pound for each year of the tree's age may be applied each season. To obtain the best results two or three applications should be made during the growing season. The fertilizer should not be applied too close to the trunk of the tree, but should be placed out far enough to be reached by the lateral root system.—EDITOR.]



The Williams Pecan

Editor NUT-GROWER:

I am mailing you a sample of my Jewett-Success hybrid, the Williams. Please sample same. I consider it a valuable addition to the commercial varieties of pecans. It is surely a good bearer; 5 nuts in 1912; 98 in 1913; over 700 excellent nuts in 1914. This tree is a top-graft on a seedling tree, scion from the original hybrid of Jewett and success, set (or graft made) season of 1907. The original hybrid is crowded by other trees and can not do its best but has borne two seasons.

C. FORKERT.

Ocean Springs, Miss.

[Judged by the association's scale of points, the Williams shows up as follows:

Size	15
Form	4
Color	4
Shell	9
Cracking	19
Plumpness	19
Color of kernel	5
Quality	14
	—
	89

—EDITOR.]

Pecan Trees Satsuma Oranges and Grape Fruit Trees

That are Right

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Pecans

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His First Crop

Editor NUT-GROWER:

I am a Mississippian and own the old homestead in Amite county where I was born. In January, 1912, about the 20th, to be exact, I set out my first pecan trees, the Success and the Stuart; the Success 5 to 6 feet; the Stuart 4 to 5. This was the beginning of my pecan grove and on October 20, 1914, I gathered my first crop—one pecan!—of the Success, and it is a beautiful specimen.

Can you beat that record—January, 1912, to October, 1914? My only regret is that I did not start ten years ago.

SILAS H. JENKINS.

Chicago, Ill.



Likes The Nut-Grower

Editor NUT-GROWER:

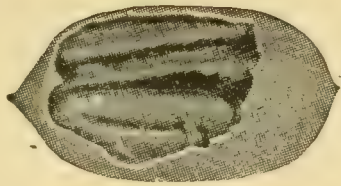
Inclosed find \$1.00 for subscription to your magazine. I'm well pleased with it: I've been looking for just such a paper for some time.

I have 25 pecan trees that I budded last June one year ago to the Stuart on 8 year old seedlings. The branches from one tree in 16 months have grown 46 feet and 10 inches from three Stuart buds. About four months they lay dormant, but counting every day and night they must have grown five inches a day. Why, with blue glasses I might have seen them climbing up, and I think this forever condemns the assertions of folks who think the pecan is of slow growth.

Why the Lord made cottonwood trees, willows and thorn bushes, I do not know. They are the sorriest trees in the forest, but people set them out just the same. They do not look ornamental, make no shade, nothing to eat or to produce revenue, and the cottonwood is even no good to make a fire with on a cold winter day.

E. D. COOK.

Shreveport, La.



The Pecan Business

A 32 Page Pamphlet

Tells all about this Prince of Nuts, from planting the seed to marketing the crop, with description of the very best varieties.

A Free Copy
on Application

B. W. STONE
Thomasville, Ga.

Nuts and Trees for Sale

Pecan Trees

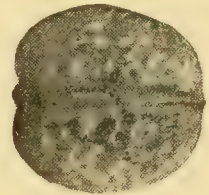
**Do You Want Trees
That will Grow
and Bear
?**

If so, learn about my methods of propagating, handling and shipping before you decide where to buy.

Information about pecan growing given for the asking :: ::

J. B. WIGHT
CAIRO, GA.

**My Pennsylvania
Grown Budded
and Grafted Eng-
lish Walnuts will
succeed with you**



It is not too early to figure on your wants for fall planting.

My illustrated catalog and cultural guide will interest you.

Free for the asking.
Address

J. F. JONES

The Nut Tree Specialist
Lancaster, Pa.

For Sale Cheap

Pecan trees grafted from bearing trees in my orchard. Best quality and best known varieties. Sizes 2 to 6 feet. For prices write H. H. SIMMONS, 25 Ocean St., Jacksonville, Fla.

SATSUMAS

OUR stock of Satsuma orange trees for this season are trees worthy of the name; not little plants or switches. They are two year tops on four year (transplanted) stocks and have a root system that will make failure impossible.

They must be seen to be appreciated. 25,000 in stock. Call for tree

Jenning Nursery
Jenning, La.

Bearing Pecan Orchard

For sale—70 acres top-worked trees that will save ten years of your time. Can be bought right and on favorable terms.

Standard Pecan Co.
H. S. WATSON Manager Monticello, Fla.

PECAN TREES

Budded Paper Shells
BEST VARIETIES
Expert Propagation
Healthy and Hardy
Stock

Write for Prices
T. H. PARKER
MOULTRIE, GA.

Bullard Pecan Nurseries

All the Leading Varieties
Large Nurseries

Budding and grafting wood for sale. Orchard trees receive best cultivation, thus insuring wood to be in prime condition for use. Careful packing and no mixing of varieties; this applies to both propagating wood and nursery stock.

WILLIAM P. BULLARD
ALBANY, GA.

Budded Pecan Trees Our Specialty...

We grow the old standard varieties—Stuart, Frotscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to 5 years old, for sale. Come to see or write

TUCK BROTHERS
Thomasville : : Georgia

THE NUT-GROWER

Budding the Pecan

BY E. J. KYLE

There is very little winter budding of the pecan. In the old southern states and in the eastern part of Texas whip or tongue grafting is very commonly practiced during the winter months. A majority of the seedling pecans in the nursery row are worked this way. The grafting generally starts about the first of January and can continue until active growth starts in the spring, provided the scions are kept dormant. In whip grafting the soil should be pulled away from the young seedling for a depth of about two inches. The scion is then inserted and either wrapped with light string or cloth, or stiff clay placed around the graft so as to hold it in position until a union has formed. The soil should then be banked up around the graft, leaving only about one inch of the scion exposed.

Chip budding has been used with considerable success for several years. For best results this work should be started between the 15th of February and the 1st of March and may be continued until the trees are in leaf. Where proper wrapping material has been used the chip bud has given better results in northern, central and southern Texas than the ring bud which is used during the summer months.

In using this method, bud wood should be taken from healthy bearing trees and care should be taken not to allow it to dry out. The part used consists of a strip of bark about one and one-half inches long and contains one sound bud and oftentimes a small amount of wood underneath the bark. A place is cut on the stock for the bud to fit into, after which a strip of cloth that has been dropped in beeswax and then taken out, allowing most of the wax to drop out, is placed over the bud, allowing it to project through an opening cut near the center of the cloth. The cloth is then tied tightly with raffia.

The W. B. Dukes Pecan Farm Moultrie, Georgia

Growers and
Shippers of

FANCY PAPER SHELL PECANS

Budding and Grafting wood for sale

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

P. J. Berckmans Co.,
FRUITLAND NURSERIES,
AUGUSTA, GEORGIA.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

President Pecan---

None Better

Pecan Growing Made Easy

By planting trees dug with entire tap root and well developed lateral roots. Few nurseries have such trees.

Made Profitable

By planting only genuine budded or grafted trees, of best quality and best producing varieties. Some of the biggest, thinnest-shelled nuts don't bear—beware of them

Griffing's Trees are Models Root and Top

Our varieties are best. Gold Medal awarded our pecans at Jamestown Exposition. Handsome pecan catalog free.

**The GRIFFING BROS.
COMPANY**
NURSEYMEN
JACKSONVILLE, FLORIDA

Pecan Trees That Grow

Are our specialty. We can still furnish the leading varieties in the various sizes.

Standard Pecan Co.

H. S. Watson, Manager
MONTICELLO, FLORIDA

PECAN TREES

Our Specialty is growing wellrooted budded and grafted trees of best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

NEW ORLEANS

Geo. H. Appel & Co.

P E C A N S

HEADQUARTERS

Appoint us your representatives and correspondents

Laux & Appel, 211 Poydras St.

Postoffice Box 976

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

OCEAN SPRINGS, :: MISSISSIPPI

For Sale

**Pecan Bud and Grafting
Wood**

From Bearing Trees

Frotscher, Stuart, Van Deman, Mobile, Money-maker, Young, with a few Jerome, Success and Nelson. \$7.50 per 1000.

C. L. WHITNEY, Thomasville, Ga.

When growth starts in the spring all sprouts should be kept rubbed off the shoot until the bud either forces out or is found to be dead. It will be necessary to keep all shoots rubbed off until the young shoot gets large and strong enough to take up all the sap and energy of the young tree.

The young trees should be carefully staked the first season or else they will be blown off by the first hard wind. Buds forced in this way will often make a growth of from four to six feet during the first season. For summer budding we are now discarding the ring bud for the patch bud, which is a modified form of ring bud.

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Report of Committee on Publicity

At the National Nut Growers' convention the committee on Publicity made the following report:

The work of this association has thus far been largely directed in the lines of orchard development and improvement of varieties.

The advantageous selling of present and future enlarged crops will measure the financial success of the industry.

The necessity for a ready market is imperative.

In order to have such a market there must be a constantly increasing demand for our product. Such a demand will come only as the general public is educated to the value of nuts as a staple food product, as well as a luxury.

At present the public at large have little knowledge of the food value of pecans, nor of the variety of uses to which they are readily adapted.

To educate the public to such an appreciation of pecans that it will create interest and a desire to use them regularly and largely is the task before us.

Such a propaganda is ordinarily promoted by advertising, which necessarily entails large expenditure of cash.

As the association does not at

Budding Tool

Patented 1905

A popular tool for budding Pecans, Hickories, Walnuts, Chestnuts, Persimmons and all other trees.

Buds and Grafting Scions

of Schley, Stuart, Alley, Delmas, Van Deman, Teche, Russell, Mobile, Frotscher and Success.

■ Wholesale and Retail ■

For particulars and prices write

HERBERT C. WHITE

Putney P. O. :: Georgia

SHIPPING POINTS: Baconton, Ga., DeWitt, Ga., Hardaway, Ga., Albany, Ga.

Pecan Trees

We are headquarters for Pecan Trees in the Southwest and can furnish extra fine trees in large quantity for commercial orchards. Our stock runs heavy in

**Stuart
and...
Schley**

We also have a fine lot of Citrus to offer for fall and winter 1914-15.

**The Louisiana
Nut Nurseries**

Jeanerette, La.

present have funds for such use, it becomes our duty to suggest ways and means for conducting an educational campaign by other means.

We therefore recommend:

1. That all members of this association, and others who may be willing to assist and co-operate in carrying into regular execution the following plan for the wide distribution of a series of educational leaflets, envelope enclosures and reprints of suitable articles, etc., entering them with their daily letters, catalogs or circular mailings.

2. That the actual cost of printed matter thus used be borne by the members and others using them in proportion to quantity desired per month.

3. That your Committee on Publicity be authorized to issue at least monthly and without expense to the association, suitable leaflets, reprints or folders, in such quantities as may be engaged by those who agree to distribute them regularly and systematically.

4. We recommend that your committee be entrusted with a modest supply of pecans, to be used systematically and carefully in developing an interest in pecans in northern and western population centers and that interested growers be requested to contribute from one to five pounds each for this use.

J. F. WILSON,
W. C. JONES,
R. B. SMALL,
S. S. HOTCHKISS,
Committee.



Sam H. James' Announcement

This winter I shall have for sale Stuart and Moneymaker budded pecan trees, grafting and budding wood of nearly all leading kinds, also lespedeza seed. I started growing pecan trees in Feb. 1878, and have been in the business ever since. I have tested here upon my plantation nearly every known variety of pecan. I find only two vari-

Which Tree Do You Want?

The slow-grower, with few and shallow roots and fruit of poor quality, or the vigorous, quick and steady producer of prime fruit?



The Roots Tell the Reason Why

Trees set in blasted holes bear fruit one year earlier. Write for Orchard Booklet No. 325 and learn how to stop first year losses and get quick profits.

We furnish inquirers with name of nearest professional blaster, whom they may hire, if they do not wish to do the blasting themselves. Experienced blasters not on our list should apply for listing.

DU PONT POWDER COMPANY
Wilmington, Del.
Established 1802

5,000 Stuart Pecan Trees

6 to 9 Feet Tall
Get Our Special Prices

We also have
other varieties
and prices.

Let us know
your wants.

**The Paper Shell Pecan
Nursery, Ltd.**

W. M. Ellison, Mgr. LAFAYETTE, LA.

Horticulture

A Magazine of Trade News
and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$1 per Year

**HORTICULTURE
PUBLISHING COMPANY**

11 Hamilton Place
Boston, Massachusetts

Ocean Springs Pecan Nursery

Season 1914-15

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

Satsuma Orange Trees in Quantity

To insure first-class trees, your orders should be placed early. Nurserymen will not be able to supply the demand for citrus trees this coming season.

The Best in Budded and Grafted Pecans and General Nursery Stock

Write for information and prices at once.

FLORIDA NURSERIES

W. W. BASSETT, Proprietor

MONTICELLO, FLORIDA

Pecan and Walnut Trees

Plant our hardy, northern grown Pecan and Persian Walnut trees for best results in the northern portion of the pecan area and in the far northern states. Learn about our trees and our methods of growing them. Our booklet "Nut Trees" will be sent free on request.

Arrowfield Nurseries—Box N—Petersburg, Virginia

Biloxi Nursery

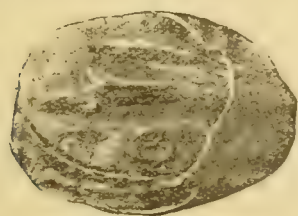
Biloxi, Miss.

Grafted Pecans, Satsumas

Roses, Magnolia Grandiflora

JAMES BRODIE, Proprietor

SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

Pecan Trees

Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

Turkey Creek Nursery Company,

Box 21.

Macclenny, Fla.

RHODES DOUBLE CUT PRUNING SHEAR



RHODES MFG. CO.

522 S. Division Ave.

GRAND RAPIDS, MICH.

Cuts from both sides of limb and does not bruise the bark. We pay Express charges on all orders. Write for circular and prices.

eties that are perfectly healthy and which are enormous bearers. They are Moneymaker and Carman. I have fruited these pecans for 22 years and have sold them to the multi-millionaire class in the north, and they have invariably come back for more. I have just filled Thomas A. Edisons', John D. Archbalds' and J. M. Studebaker's orders. The nurseryman who is not growing these two varieties is standing terribly in his own light. Sam H. James, Mound, La.—Adv.

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Crops and Markets

Hickory nuts are being shipped to Chicago from Troup, Tex., in car lots.

The pecan crop at Uvalde, Tex., amounted to approximately ten cars.

The hickory and chestnut crop in northeastern Ohio this season was light.

Shipments of pecans from Ada, Okla., this season will aggregate about 125,000 pounds.

A San Antonio report places the Texas crop this season at 40 per cent of the normal yield.

The Galveston, Tex., market recently quoted Brazil nuts at 22 cents, pecans at 15 to 20 cents and Sicily filberts at 19 cents.

Receipts of hickory nuts and black walnuts were light in New York the past month and quotations advanced to a favorable figure.

Pittsburgh, Pa., has been manifesting a good demand for all kinds of nuts. Persian walnuts sold as high as 22 cents and fancy pecans ranged from 55 to 60 cents.

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Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of

FOR SALE

Pecan grove of 52 acres, located in the best farming section of Southwest Georgia, one mile from depot on Georgia Northern railroad. Trees are of the latest variety and are five years old. Price right and terms reasonable. Address

L. W. HARDY, Barwick, Ga.

very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.



Books and Catalogs

Report of the Secretary of Agriculture for 1914. 48 pages.

Pecan Rosette, by W. A. Orton and F. W. Rand; a 24-page reprint from the Journal of Agricultural Research. Ten illustrations.

Munson's Nurseries, Dennison, Tex.; illustrated catalog for 1914-15; 48 pages closely printed descriptions of fruits and flowers.

The A B C of Bee Culture; a cyclopedia of 700 pages of revised information; profusely illustrated. Price \$2.00. The A. I. Root Co., Medina, O.

The Beekeeper and the Fruit Grower; Why and How their Interests are Mutual; a 16-page booklet by E. R. Root. The I. A. Root Co., Medina, O.

Atlantic Coast Line calendar for 1915. Gives much popular information about this road. Copies may be obtained from E. M. North, Assistant General Passenger Agent, Savannah, Ga., by sending six cents to cover postage.



Large crops of pecan and hickory nuts were gathered along the river bottoms west of Clinton, Ky.,

THE NUT-GROWER

10,000 Fine Pecan Trees

We have for sale this season 15,000 strong, healthy, budded and grafted pecan trees; well developed roots; Stuart variety. Special wholesale prices.

Louisiana Delta Pecan Company

R. C. ANDREWS, Sec.-Treas. Marshall, Tex.

Pecans, Satsumas, Grape Fruit

We have them in QUANTITY as well as QUALITY. Our stock is especially strong in large grades. Let us figure on your wants. Orders for one tree or one car load given the same careful personal attention.

Simpson Nursery Co.

Monticello, Florida

Established by G. M. Bacon in 1889. Incorporated 1903.
The Oldest Exclusive Pecan Nursery.

The G. M. Bacon Pecan Company

DeWitt, Georgia

Standard Varieties of Properly Grown Trees



Our many years of practical experience combined with the scientific study we have made of the industry enables us to supply to the best advantage the wants of our patrons.

Prompt attention to inquiries.

Send for Price List.



The G. M. Bacon Pecan Co.

DeWitt, Georgia

THE financial success of all horticultural enterprises (like any other commercial business) depends mostly upon the quality of the stock to be used. This quality of stock is highest when grown by experienced nurserymen.

We are pioneers in growing citrus and pecan stock in this section, and the care of our nurseries is directed by one of the foremost horticulturists and nurserymen in the South. His long experience and valued knowledge has enabled us to ship trees to the same patrons year after year, and "a satisfied customer is the best advertisement a company can have." Buyers of our stock are scattered from Virginia to Texas and most favorable reports are coming from all parts of the South.

We are in the business to stay and can afford to send out nothing but first-class stock. We know the value of pleasing our customers and would be glad to add you to our long list of satisfied ones.

Our stock consists of Pecans, Satsuma and miscellaneous Oranges, Grapefruit, Kumquats, Peaches, Plums, Figs, Grapes, Roses, Ornamentals, etc.

Ask for Catalog A.

SUMMIT NURSERIES Monticello, Florida

which sold for good prices. As farm crops were poor in that section, the proceeds from the nuts proved to be a great benefit to the farmers.

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Farmers' Short Course at Athens, Ga.

Atlanta, Birmingham & Atlantic Railroad has named exceedingly low fares to Athens account Special Courses at the State College of Agriculture, January 4th to 20th. Round trip tickets on sale January 3-4-5-6-10-11-15-16 and 18, with final return limit January 23, 1915. Ask A. B. & A. Ticket Agent.

Best service and schedule via Atlanta. All trains make direct connections.

W. W. CROXTON.

General Passenger Agent,
Atlanta, Ga.

◇ ◇ ◇

Grading Walnuts

Walnuts are graded either by passing over a moving screen or through a revolving cylinder, the meshes of both which are one inch square in the clear. All the nuts that go through the mesh are classed as No. 2s, and those that go over as No. 1s. As only the No. 2s pass through the mesh of this screen, those that class as No. 1s may vary considerably in size—in fact, such variation is at times very noticeable, so that people are apt to think that some of the nuts purchased as No. 1s are below grade. It is well known that nuts of the proper size appear smaller than the really are when compared with large sized ones.

After grading the nuts are carried along an endless belt to large, elevated bins built of laths, allowing for perfect ventilation and circulation of air, so that they may become thoroughly dry. They are then sacked and loaded on the cars.

◇ ◇ ◇

Orchards may be rejuvenated by blasting between trees to loosen the sub-soil.

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at "Glen Arden Farm," Showing Both the Cut and Standing Hay

Most Wonderful Growth. The Coming Forage Crop of the South. Better than Alfalfa, Red Clover or Timothy. Better because it succeeds on land too poor for those crops. Better, because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran, from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write.

G. E. Pleas Plant Co. "GLEN ARDEN FARM"
CHIPLEY, FLORIDA

FOR SALE. Budded Pecan Trees, standard varieties; order now for winter delivery. Also 45 acre two year old pecan orchard; also improved farms. C. W. RANSOM, Houston Texas.

FOR SALE. Back numbers of THE NUT-GROWER. Parties desiring to complete their files should send list of what they need. The Nut-Grower Company, Waycross, Ga.

Members National Nut Growers' Association

Members Georgia-Florida Pecan Growers' Association

ROOD PECAN GROVES

C. M. ROOD, President
ALBANY, GEORGIA



Twenty-seven year old
bearing Pecan Grove for sale in
small tracts on small payments

We are now booking or-
ders for Pecan stock for fall
and winter delivery.

The largest Pecan and En-
glish Walnut Nurseries in
Georgia.

We sell large soft shelled
standard pecan nuts put up in
1, 5 and 10 pound fancy boxes.

Send for catalog.



ROOD PECAN GROVES

ALBANY, GA.

The Nut-Grower

Volume XIV

February, 1915

Number 2



THE healthy sense of progress, which is necessary to the strength and happiness of men, does not consist in the anxiety of a struggle to obtain higher place or work, but in gradually perfecting the manner and accomplishing the ends, of the life which a man has chosen, or which circumstances have determined for him.

10c per Copy

\$1.00 per Year

Nothing Equals Gow Peas

For Soil Improvement in
the South.

Plant in Groves
and Orchards

Iron Peas
Brabham Peas

Hardy, disease-resistant. 26 other varieties. Price on any quantity.

Rowland & Co.

Seedsman—All Field Seed
Augusta, Georgia
ASK FOR MONTHLY BULLETIN

Save Your Copies of The Nut-Grower

By preserving them in
**THE NUT-GROWER
BINDER**

JUST what you have been wanting for lo, these many years. Bound in black leatherette, stamped in gold. Outfit provides for 12 numbers, but with additional binding rods with take care of two volumes.

\$1.25

POSTPAID

The Nut-Grower
Waycross, Ga.

PECANS

Budded trees of the best varieties.
PRICES RIGHT.

THE HARTWELL NURSERIES, Hartwell, Ga.
The Original Pecan Nursery in Georgia

FOR SALE

1,500 pounds fresh crop pecans. Also pecan grove including 200 acres land. Apply to **J. S. Williams, Waycross, Ga.**

THE NUT-GROWER

Items of Interest

An Oklahoma editor offers to accept pecans at 10c a pound on subscriptions.

The record of J. B. Wight's famous Frotcher tree at Cairo, Ga., last season was 145 pounds.

The California Fruit Grower of San Francisco has changed its name to the California Fruit News.

The thirty-ninth annual meeting of the Georgia State Horticultural Society convened at Athens January 19.

A new corporation at Albany, Ga., is the Georgia Paper Shell Pecan Co., with a capital stock of \$20,000.

The Brazos Valley Plantation of Texas is planting 3,000 acres of pecans and inter-cropping with figs. A graduate of the Texas A. & M. College is in charge of the work.

A Texas man recently came to grief because he offered too many pounds of pecans for a dollar. A post-office inspector worked up a case against him for using the mails with intent to defraud.

A story comes from Pauls Valley, Okla., telling of the purchase of 40 acres of land three years ago for \$600. Since then the purchaser has gathered and sold over \$800 worth of pecans from this same land.

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Another Record Tree

K. Powell, of Cairo, Ga., has a seedling pecan tree 26 years old in his back yard. While it is near his garden and is fertilized and has the soil about it broken once a year, it has received no special attention. Below is given the record of the tree for the last few years:

Year	Pounds	Value
1908 . . .	365 . . .	\$ 91.25
1909 . . .	425 . . .	106.25
1910 . . .	465 . . .	116.25
1911 . . .	92 . . .	23.00
1912 . . .	525 . . .	131.25
1913 . . .	49 . . .	12.25
1914 . . .	600 . . .	150.00

2551 630.22

Annual Average 360 pounds.

Pecan Literature

The increasing demand for information regarding pecans prompts the publication of the following list of publications, which we can furnish at prices named.

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 50c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

The Nut-Grower
WAYCROSS :: GEORGIA

THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., FEBRUARY 1915

NUMBER 2

TREE BREEDING

BY E. E. RISIEN

Delivered at the Thomasville Convention of the National Nut Growers' Association

So much has been written under this headline that it is not tree breeding at all. It now becomes the duty of any one who has done this work to state a few facts. Speaking for myself, I will first say that it is astonishing how few people seem to know, or have even given it a thought, that there is male and female in all vegetable life, as with all animal life, or that trees and plants have their age, time and season for breeding very much the same as in animal life. And so little thought is given to the laws of Nature that it is actually news to some that trees sleep, and must have it or they will dwindle and die. Some of our winters are not cold enough nor long enough to permit the amount of sleep necessary for them to fully recuperate from the previous tax of our long, hot, dry summers. This often has a bad effect on the fruit and in some cases makes them shorter lived. Neither does it take a close observer to notice that some trees sleep longer than others. The common term for this is early and late blooming; and we will also add, trees and plants all have their likes and dislikes; that is why we find ideal trees growing under ideal conditions.

Tree breeding, we presume, began with the dawn of creation. The wind and insects then must also have been active, carrying the pollen from tree to tree for the purpose of cross-breeding; this being so very essential to retain vigor from generation to generation; for in all inbreeding we see this exemplified.

My seedling orchard of one thousand trees, and all from the one mother-tree, San Saba, furnishes a splendid illustration of tree breeding done by the wind and insects, using pollen from the nearby inferior trees, just anything and everything; and these nuts are all good enough for the squirrels and other rodents, and to some extent supply the market. The wild and crude is fast passing away. The cultured mind and cultivated tastes of man will not have them when it is possible to do better. And this is why

the pecan tree is now getting so much attention, and will soon be bred up to that degree of perfection as to make it a joy forever.

My first successful work at tree breeding was in the union of the two best paper-shell pecan trees growing in San Saba County. The nuts of these trees were not large, but had qualities in them I wanted to see blended. This work was done in the early part of May, 1904, and I remembered followed by a rain and wind storm, that destroyed about two-thirds of the paper bags (described later on.) However, in the fall I was able to count fifteen nuts for planting. The best nuts are not found near the body of the tree in protected parts, so I didn't consider these fair samples. These fifteen nuts all germinated and grew. The mother tree of these was San Saba. The father tree Sloan (growing on Mr. Sloan's land.) These fifteen little trees were not long in showing great variations both in growth and in the leaves. Now to wait on these little baby trees to grow up and fruit naturally, life, I considered too short for that; so the next year they were cut to the ground to get suitable buds for top-working. By managing them this way, possibly eight or ten years were saved in the time of fruiting. Anyway, I got to see sample nuts from the union of these two old trees that were growing twenty-seven miles apart, in five years from planting the seed.

This little group of nuts was an eye-opener, for they revealed to what extent these two breeds bred back to the common wild types, which were mostly in evidence; and that the pollen proved to be pre-potent factor, was also plainly shown, both in the character of the trees and nuts. There were also several that for want of a better name, I call false hybrids. These are nuts that never fill, caused presumably from faulty or immature pollen; in fact, I only secured one well-defined cross, this nut is considerably larger and retains all the good qualities of both

parentage. I have not catalogued it for the simple reason that many people are quite foolish about size, and the general market demands large nuts. However, with this partial success, acquiring the knowledge that the pollen is the prepotent factor, and that it does not take a whole lifetime to wait on the breeding of pecan trees artificially, my enthusiasm was renewed, so more of this work had to be done.

Now what I wanted to know most, and what I still want to know most, is, the science and art of blending the different varieties to get the best effects and most efficiency out of the trees. So keeping these two features in view, my next selection was to again use San Saba for the mother tree, Atwater for the father tree. The Atwater nuts are a very uncommon type; the green husk that covers the nuts is the thinnest I have ever seen, above medium size, soft, thin shell, and the bright coloring is not excelled by any, but is not a good keeper. In the San Saba nut we have the other extreme as regards keeping qualities. The union of these two trees resulted very much like my first experience: they showed up their common ancestry, with some false hybrids, but with only one well defined cross. In this I secured a prize, a decided improvement on the parentage of either side. The tree has more vigor, the nuts are much larger, and in the coloring they far excel anything in the pecan line. It was by laying one of these nuts on a pile of common pecans, that suggested the name, Venus. But there is one feature that puzzles me, that is the lateness of ripening, being fully a month behind the parentage of either side.

My third experiment was to use Texas Prolific for the mother tree, Atwater, the father tree. I have fruited a great many seedlings of the Texas Prolific fertilized by the wind and insects, all of which have been disappointing; but in fruiting the offspring from the union of these two trees the result was to get some prizes and many surprises. The perfect blending, however, I only found in one. It is a beauty; have named it Banquet. It is large, too, very large; immensely prolific; ripens a week earlier than either parent and retains that bright coloring characteristic of both sides. This alone gives it a distinction from the common herd. In fact, with this the "razor-back" stock may now be considered pretty well bred out, and from the nucleus which I now have, it will take but another generation or two of our well bred western nuts to invite criticism from the most fastidious.

In these two new creations, Venus and Banquet, we have an unexplained mystery. Why is it that there is a difference of five weeks in the ripening of these nuts when the parentage on both sides ripens the same, neither early or late? So we see there is yet lots to learn.

My observation of the eastern and western pecans convinces me that there are two families of

them, and although I have quite a collection of the eastern varieties so highly lauded, I have made no attempt at crossing them, for I have not yet been able to see how anything is to be gained by so doing.

BREEDING THE TREES

In doing this work artificially, it is absolutely necessary to securely tie a paper bag over each cluster of nuts, just about as soon as they can be discovered; because at this stage of growth the air is apt to be well impregnated with pollen from the surrounding trees, and in high winds it may visit our trees from miles away. To save the pollen for use artificially, we have but to watch the ripening of the catkins or male blossoms; then just as soon as the pollen commences to waste, it is ripe. Now strip off the catkins into a paper bag, take to a warm dry room, empty on a sheet of paper, spreading them out. In a few hours the paper will be covered with a yellow dust. This is pollen. It is now an easy matter to separate this for use by running it through a fine sieve—a milk strainer will do. This I put into a pill bottle to use from, as needed. The vitality of it is good for a month, maybe longer.

The pistillate or female blossoms to receive this pollen are on the end of each nut; these are small but plainly seen. By watching closely we can soon learn the receptive stage for the pollen. They open very much like any other flower. The pollen may now be put on most any way. A small pepper shaker works very well, but it is wasteful; or a camel's hair brush, such as comes in a box of water colors may be used. I use a medicine dropper, slightly pressing the bulb; this gives just about the right amount for each application. The paper bag should then be tied back and left on for about two days as a further precaution against foreign pollen. After this time has elapsed, any pollen from another source would not be effective.

SEED NUTS

Every year does not furnish them, although the general market may be well supplied with pecans. But seed nuts for breeding, this is something different. The importance of this I can better explain, by saying that should my cross-breeding work be followed by an unfavorable season, all that time and work is lost. I never plant those nuts; the climatic conditions, let them be favorable or unfavorable, are all registered in the seed. Now it may not be necessary to be so particular with short-lived annual crops, such as cotton and corn, but with long lived trees, we think there is actually a great saving of time in waiting, and planting only from good normal years. Seed from very old trees or very young trees should not be planted for breeding purposes, but rather from those in their prime. Neither will it do to plant from trees that the heart wood is decaying, because the laws of nature are very exacting; so in view of this fact see to it that all imperfections are eliminated as much as possible. And do not forget: we must

feed as well as breed.

ANNUAL FRUITING

From the fact that some of our best pecans are from trees that are not annual fruiters, there is a great need of more light on this subject. The abnormal yields we get from some trees are invariably followed by disappointments. I have in mind many such cases. From one tree in particular, twenty two bushels were thrashed off, and the parties that did the thrashing, said they lacked three or four bushels of getting them all. When the boosters and promoters heard of this, of course, they had to get busy figuring out how many such trees to the acre, the cash value, etc., proving conclusively how easy it is to get rich quickly by planting pecans. But this, like everything, has two sides to it, the other side is, that tree is ruined; it has never got over such abnormal fruiting and never will. And while this may be an extreme case of over-fruiting, this, with under-fruiting, is *too much the rule*. Fortunately, however, for the breeder, there can be enough good annual fruiters found to retain and perpetuate this very important trait. Now as to the cause of these extremes of irregular fruiting and not fruiting, we advance this theory. The home of the pecan tree is in a section of subtropical climate that is most always on the extremes; so growing under these environments for tens of thousands of years, the trees have conformed to the conditions of life and partaken of the same nature. Not even our late frosts that we always have, stop their fruiting. Last year the fruit crop of my county was a total failure, but the pecan crop was unusually heavy. I have known them bitten back the second time by frost, and then yield fairly well; in fact, the extreme climatic conditions of heat and cold, dry weather, etc., appear absolutely necessary to the full development of the nuts. The conditions of August weather, I regard as the most important, so here is the government report of August, 1910, when the whole crop of San Saba County pecans samples the best I have ever known: Mean temp. 84.5, min. temp. 64; max. temp. 105; days clear, 27; cloudy, none; partly cloudy, 4; total rainfall, .06 inches. The rainfall for the month was below normal. The heat was more intense and lasted longer than any similar period since I have been keeping the record, for nineteen days the temperature went from 100 to 105.

And while this tree does grow well and flourish in a more congenial and salubrious climate, the defects in the fruiting qualities become more and more apparent the further away from home they grow. To prove this, I quote from Bulletin 324, of the North Carolina Experiment Station: "According to a census we have just completed, there are in this State upwards of 50,000 seedling pecan trees. These trees range in age from one to thirty years. Seventy-five per cent of them are of bearing age, but there is not

probably one per cent of that number that are profitable bearing trees. In all parts of the pecan country experience has shown that seedling pecans are notably slow in coming into bearing, and some trees never bear at all. Those that do bear have nuts that are almost invariably small, thick shelled, and of indifferent quality. In this respect, however, the pecan tree differs in no way from any of our other classes of fruits. No one would to-day be so foolish as to try to get a good peach or apple orchard by planting the seed of these fruits. But this is just what a great many people have been trying to do with pecans."

HYBRIDS

There must be something very catchy or fascinating about this word, for it to be so often used in advertising novelties, some that are not hybrids at all, according to the way this word is defined in the dictionaries.

HYBRIDIZING THE PECAN

This means to cross the pecan with the walnut, hickory, or some other nut. But so far my attempts at this have been a failure. The several shipments of walnut pollen sent me from California have been too long in transit. Walnut pollen is not effective after it becomes dry. Dr. Morris, of New York, also sent me pollen from his choice hickory; this also failed. Now, however, that I have both the hickory and walnut growing on my own grounds, I hope to yet make this cross. Just why a hybrid of this sort should be a valuable acquisition, is because where the English walnut grows to its greatest perfection, the pecan is not a success; and where the pecan grows to its greatest perfection the walnut or hickory is not a success. In a true hybrid I have the greatest confidence that it will be a grand success, on either side of this continent or in various other parts of the world.

PRE HISTORIC

It will interest the geologist to learn that I have a pecan nut of the prehistoric age. This nut was blasted out of a solid rock thirty-eight feet below the surface of the ground, while digging a well ten miles west of San Saba. Is this sufficient proof that San Saba County is the home of the pecan?



For the permanent improvement of soils it should not be overlooked that lime and organic matter (humus) are also frequently needed. Lime is especially useful on sour soils and makes them sweet. Humus is the product of decaying plants and is useful to make soils more loose and retentive of water. It may be furnished either by using stable manures or by green manuring. In the case of green manuring, humus is produced directly through the decay of plants plowed into the soil, and in the case of stable manure indirectly, after the plants have passed through the digestive organs of the animals.

The Nut-Grower

Published monthly by The Nut-Grower Company

Entered as second-class matter November 20, 1911, at the post office at Waycross, Ga., under the Act of March 3, 1879.

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

The Practical Farmer of Philadelphia, Pa., is a new and appreciated visitor to our exchange table.

◇ ◇ ◇

The importation of walnuts continues to increase, and the volume is considerably beyond the home production. The figures for 1913-1914 are 18,597 tons as against an average home crop of about 11,000 tons.

◇ ◇ ◇

One of the new advertisements in this number is timely in offering cow pea seed for orchardists. Any and all of the legumes are desirable in building soil fertility, and the pecan responds readily to such intercropping.

◇ ◇ ◇

A letter from one of the New England states says, "It is always a pleasure to receive copies of THE NUT-GROWER, for there is much of interest in this little magazine for the reader and for those who are interested in the development of nut culture."

◇ ◇ ◇

Top working pecans in Texas is showing surprising results. A party in Dallas reports that he gathered 435 fine Halbert nuts from a tree that Judge Edwards top worked three years ago, and that he had 114 the previous year when the tree was only three inches in diameter.

◇ ◇ ◇

The Annual Review number of the California Fruit News is a magnificent issue with 80 pages of appropriate matter with various tables showing production for the year as well as importations of fruits which are in competition with the fruit crops of the state.

◇ ◇ ◇

The Waycross, Ga., section, while new in the field of modern pecan orcharding has thousands of seedling trees of fine quality, which are bearing well.

During the past three years the planting of budded and grafted trees has been active, and while large orchards are not yet numerous, there are many private enterprises well under way.

◇ ◇ ◇

One of the things omitted at the convention was the keeping of a register of the names of all the members, guests and visitors who attended. Such lists are not only of interest but are valuable in different ways. Houston took particular pains to advertise to the world the names and addresses of everybody present at the 1913 convention.

◇ ◇ ◇

A progressive farmer near Tifton, Ga, set ten Satsuma orange trees seven years ago as an experiment. The experiment proved so satisfactory that the planting has been since increased to 300 trees. A report in a local paper says that one of these original trees bore 97 dozen oranges last season, and the crop from the ten trees was worth \$165.00.

◇ ◇ ◇

Cairo, Ga., has a seedling pecan tree which is pushing Mr. Wight's Frotscher with a wonderful record. In our news column we give the record for the past seven years as furnished by Mr. W. C. Jones who vouches for the accuracy of the record. He says the crops have sold uniformly at 25 cents a pound. As judged by its average yield and price obtained for the crops this tree is evidently worth a thousand dollars.

◇ ◇ ◇

Mitchell County Georgia, just north of Thomasville, is a banner county for pecan growing and has some of the largest bearing orchards in the world. This is the section where the G. M. Bacon Pecan Company has its extensive nurseries and bearing orchards. At DeWitt the modern pecan industry was cradled, and the early history of operations at that point will some day be woven into a story of uncommon interest.

◇ ◇ ◇

Some curious figures were evolved when we figured out the distribution of THE NUT-GROWER subscribers. The state of Georgia naturally leads, with 20 per cent of the present enrollment. Illinois comes next with 9 per cent, Alabama claims 8 per cent, while Florida and Texas each have 7 per cent. Mississippi has 5 per cent and both New York and Louisiana have 4 per cent. These eight states furnish 64 per cent of the circulation. Nine other states take 18 per cent and four of these are northern states, while the remaining 18 per cent is distributed over thirty other states, the Canal Zone, Canada and eight foreign countries.

THE USE OF NUTS

Compiled by Mrs. T. A. Banning and other ladies under the auspices of the National Nut Growers' Association.

One hundred and sixteen practical recipes for the use of Nuts. Introduction by Mrs. Harriet North

Foreword by Mrs. W. N. Hutt

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We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

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W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.



WITH THE EDITOR AND HIS CORRESPONDENTS

A Reply to Mr. James

Editor NUT-GROWER:

We note in the January issue of THE NUT-GROWER a letter from Mr. Sam. H. James quoted from the Rural New Yorker on "Rosette of Pecans," wherein certain exceptions are taken to the conclusions reached by the Department of Agriculture which, in our judgment, are not justified. A copy of the letter we have sent to Mr. James is enclosed.

W. A. ORTON,

Pathologist in charge of
Cotton and Truck Dis-
ease and Sugar Plant
Investigations.

Washington, D. C.



Mr. Sam. H. James,
Mound, La.

Dear Sir:

Mr. Rand and I have read with interest your comments published in The Rural New Yorker and reprinted in THE NUT-GROWER upon the article "Pecan Rosette" recently published by this Department in the Journal of Agricultural Research.

You have credited us with "a bold misstatement of fact" relative to the occurrence of pecan rosette on swamp lands. The passage in question on page 150 of our article reads, "In fact, for the localities personally investigated, swamp land has presented the only location so far exempt. It is true that wherever the soil tends to be water-soaked through a considerable portion of the growing season the pecan presents an unhealthy appearance through its failure to make proper growth and through the sickly yellow appearance of the leaves. Under such conditions the tree usually dies sooner or later. The symptoms, however, bear

so little resemblance to those of rosette that even the most casual observer will not confuse the two diseases." In other words, as far as our observation goes the true rosette has not been found on true swamp lands. It occurs to us that this difference in observation is, after all, based on a different understanding of the term "swamp lands;" that you are referring to what we call alluvial land, that is, land which may be waterlogged or partially so during spring floods, but is relatively well drained during the growing season. Swamp land, on the other hand, we have defined as that which "tends to be water-soaked during a considerable portion of the growing season." In such swamp land we have not found that the disease occurs naturally or that it makes a healthy growth there.

Another reason for the difference in our point of view and yours may be accounted for from the fact that we have studied pecan rosette in practically every important pecan district, while your conclusions are based on Louisiana conditions. If you will refer to the map on the first page of our article you will note that pecan rosette plays relatively a small role in Louisiana as compared with Texas and the Atlantic Coast States. If we had confined our studies to a single district we might have formed more definite conclusions relative to rosette, but the more widely our studies were extended, the more we found the conclusions of one locality to be contradicted by those of another. This is particularly the case with reference to varieties, and your attention is called to the fact that the disease is constant in its occurrence in the

one orchard a certain variety may have a much higher percentage of rosette than some other variety, but in another place the relative amount on the same two varieties is just as likely to be reversed. This has been shown clearly by orchard records in widely separated localities. Evidently the difference in apparent resistance in such cases is due either to a difference in soil conditions in the two parts of the orchard or to a difference in the resistance of the stocks to the inciting cause. That there is sometimes a difference in the true resistance of the stocks seems evident from the fact that of two trees of the same variety growing side by side (1 foot to several rods apart one may have rosette and the other appear perfectly normal. If the cause of the disease lies in the soil, as appears to be the case, such an influence of the stock would naturally be expected. There appears to be little doubt then as to the existence of a difference in the resisting power toward rosette, but orchard records and observations tend to show that this difference is usually manifested through the stock rather than through the variety worked upon it." And on page 173, "As to the advisability of using rosetted nursery stock, no absolute statements can be made with the present state of knowledge concerning the cause of the disease and varying resistance of the stock to that cause. However, orchard and nursery records show rather clearly that a difference in resistance of stock does exist, etc."

We wish we might be as confident as you that the real cause of rosette is known. We have not felt justified thus far in doing more than to suggest the probability that rosette belongs in the class of "nontransmissible disease caused by improper nutritive supply or injurious physical conditions," page 171.

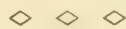
Very truly yours,
W. A. ORTON,
Pathologist in charge of

THE NUT-GROWER

Cotton and Truck Disease and Sugar Plant Investigations.

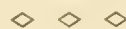


Potash is necessary for the formation of starch, sugar and woody fiber in plants; hence its importance for corn and all small grain, as well as for fruit, root and leguminous crops, which require it in large quantities. Phosphoric acid is especially needed for the formation of seed, and nitrogen is necessary for the production of leaves and stalks. But when nitrogen is in excess, it will cause a rapid and excessive, but watery and unnatural growth of foliage and of wood at the expense of fruitfulness.



The Owens Pecan

Regarding the original Owens pecan tree, Judge Edwards of Texas summarizes information as follows: The Owens pecan tree is 90 feet high and the branches spread 78 feet. The body is nine feet to the fork and nine feet in circumference. Mr. Byrum Carter of Elgin, Tex., will testify that he has known the tree 38 years, that it has not failed in that time to bear a crop of large, thin shelled pecans, and that the crops are usually very heavy. William Owens has known the tree 40 years and will corroborate Mr. Carter's statement. James Gage was raised in a quarter of a mile of the tree, has known it all his life and is 53 years old. He says it has been a regular bearer, generally producing large crops, and does not remember that it ever failed.



New Parcel Post Ruling

A new parcel post ruling has been made whereby sealed packages of fruits and nuts may be sent through the mail, providing the packages are labeled so as to show the name of the producer or manufacturer and the nature and kind of the contents. The parcel post regulations generally do not permit sealed packages being sent through the

Pecan Trees Satsuma Oranges

and Grape Fruit Trees

That are Right

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Monticello, Florida

60,000
Pounds
of...
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our 1914 crop made
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Our crop consists of
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DeWitt : Georgia

Pecan Trees

**Do You Want Trees
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If so, learn about my methods of propagating, handling and shipping before you decide where to buy.

Information about pecan growing given for the asking :: ::

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CAIRO, GA.

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None Better

Pecan Growing Made Easy

By planting trees dug with entire tap root and well developed lateral roots. Few nurseries have such trees.

Made Profitable

By planting only genuine budded or grafted trees, of best quality and best producing varieties. Some of the biggest, thinnest-shelled nuts don't bear—beware of them

Griffing's Trees are Models Root and Top

Our varieties are best. Gold Medal awarded our pecans at Jamestown Exposition. Handsome pecan catalog free.

**The GRIFFING BROS.
COMPANY**
NURSEYMEN
JACKSONVILLE, FLORIDA

mail, requiring them to be so wrapped as to allow the contents to be easily examined.

The order issued by the Postoffice Department at Washington reads as follows: Postmasters are informed that pecans and other nuts, fruits, candies, etc., put up by the producer, manufacturer or dealer as proprietary articles, in sealed packages, labeled so as to show the nature of the contents, quantity and name of producer, manufacturer or dealer, as the case may be, are mailable at the fourth-class rates of postage, under the provisions of paragraph 5, section 469, Postal Laws and Regulations. When in doubt as to the proper method of putting up such articles in sealed packages for mailing as fourth-class matter, postmasters should submit samples to the Third Assistant Postmaster General, Division of Classification, as provided in paragraph 6 of the section mentioned. (Signed) W. J. BARROWS, Acting Third Assistant Postmaster General.

Texas Varieties

F. T. Ramsey, of Austin, acknowledges that it is hard to make a list of the best Texas varieties and feel satisfied about it. He is unable to choose between Texas Prolific and Halbert to head the list so puts them both at the top with other varieties following in the order of their merit.

1. Texas Prolific. Halbert.
2. Burkett.
3. Owens.
4. Profusion.
5. Oliver.
6. Kincaid.
7. Colorado.
8. Swinden.
9. Daisy.
10. James.
11. San Saba.
12. Stuart.
13. Hollis.
14. Shell.

Jefferson county, Florida, is a great pecan county, besides having other attractions. In point of

nut nurseries, it probably has more and produces more nut nursery stock than any other county in the United States.

Planting Walnuts

In planting the Persian walnut the stock used should be grafts on one and two year roots. The grafts or scions should be considered as carefully as the root if the greatest measure of success is to be attained. In starting a walnut orchard the matter of selecting varieties best suited to the conditions existing where the trees are to be planted should be carefully considered.

Good soils underlaid with hardpan to the best deep, rich soils are adapted to the walnut. Where hardpan is under the soil dynamite should be used in each hole to break it up. The dynamiting should be done while the soil is driest as it packs and sticks together when blown up wet.

Plant the trees the same depth that they stood in the nursery.

FOR SALE. Pecan bud and graft wood. P. M. Hodgson, Stockton, Ala.

Pecan Trees That Grow

Are our specialty. We can still furnish the leading varieties in the various sizes.

Standard Pecan Co.

H. S. Watson, Manager
MONTICELLO, FLORIDA

The W. B. Dukes Pecan Farm Moultrie, Georgia Growers and Shippers of **FANCY PAPER SHELL PECANS**

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We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay pay express. 420 acres

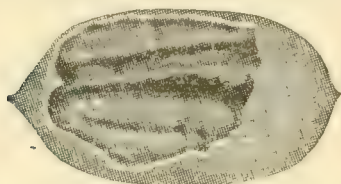
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PECAN TREES

Budded Paper
Shells.

BEST VARIETIES
Expert Propagation.
Healthy and
Hardy Stock.

Write for Prices
T. H. PARKER
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The Pecan Business

In a concise booklet **FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

B. W. STONE :: Thomasville, Ga.

making allowance for settling of the earth. Don't put manure at the roots or in the hole. Lean the tree slightly to the prevailing wind, especially if the winds are strong and constant. Press the soil firmly around the roots, and plant in December or January if possible, to allow the the winter rains to settle the earth around the roots. If the soil is inclined to be dry, settle it by pouring several gallons of water around the tree. Holes should be dug deeper than the length of the root, and fill in with good earth for the base of the root to rest on. Holes should be dug about 24 inches in diameter.



Several new ads this month.
Read them.



Insect Injuries to Pecans

BY F. H. CHITTENDEN

A very considerable proportion of damage by insects can be averted by proper attention to orchard management. This applies to insects in general. If the trees can be kept in thrifty condition by the addition of fertilizers, cutting away injured and dying limbs, and the cutting out of entire trees when their death is positively assured, comparatively little attention need be given to other forms of remedies beyond spraying. If a systematic course of spraying is instituted on the first appearance of insects which we know to be dangerous, much injury from future generations, where the insect is known to have more than one brood a year, can be largely prevented. It follows that close inspection of the orchard, particularly of the outskirts, should be made early in the season at least once a week, and later at least twice monthly. It should always be remembered that wild pecan and hickory furnish breeding places for all forms of pecan insects, and if in bad condition, to borers, and their presence, if neglected in the neighborhood of the orchard is a standing menace to the welfare of

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Our Specialty is
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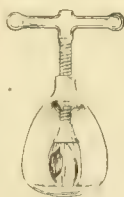
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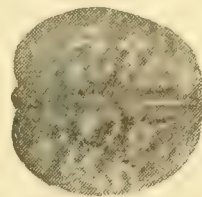
◇ ◇ ◇ Pecan Rosette

In our book and catalog column mention was made recently of the Bureau of Plant Industry's report on Pecan Rosette. This report had been anticipated for some time. The report gives much general information and is summarized in part as follows:

"Pecan rosette has been rather generally recognized by growers as a serious disease almost from the inception of pecan orcharding. It does not appear to be limited to any particular soil type, topography or season. The disease first makes itself evident through the putting out of undersized, more or less crinkled, and yellow-mottled leaves. The veins tend to stand out prominently, giving a roughened appearance to the leaf blade, and the lighter areas between the veins are usually not fully developed. The axes of growth are usually shortened, so that the leaves are clustered together into a sort of rosette. In well-marked cases the branches usually die back from the tip, and other shoots are developed from normal or adventitious buds, only in their turn to pass through the same series of symptoms.

"Observation and experimental evidence point to the conclusion that pecan rosette belongs among the chlorotic diseases of plants grouped by Sorauer into two main classes: (1) Non-inheritable and non-infectious diseases, due mostly to improper nutritive supply or to injurious physical conditions, and (2) inheritable and infectious diseases due probably to enzymatic disturbances. It seems legitimate to conclude from the data outlined in this paper that pecan rosette belongs in the first group. The evidence strongly points in the direction that the disease is caused by improper nutritive supply, and it seems probable that it is directly related to a lack of balance between two or more soil ingredients. The possibility of some re-

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OUR stock of Satsuma orange trees for this season are trees worthy of the name; not little plants or switches. They are two year tops on four year (transplanted) stocks and have a root system that will make failure impossible.

They must be seen to be appreciated. 20,000 in stock. Catalog free

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lation to soil organisms is not entirely precluded, but it is thought that the direct cause will ultimately be found in some lack of balance in the nutritive supply, or possibly in some toxic organic substances in the soil.

"There appears to be little doubt as to a difference in resisting power toward rosette, but orchard records and observations tend to show that this difference is usually manifested through the stock rather than through the variety worked upon it. Good care and fertilization are to be recommended, but the effects of lime should be tested upon a few trees before using it on a commercial scale. Pruning is of no avail as a remedial measure. Trees showing only traces of rosette may be left in the orchard; but all advanced cases should be cut out and replanted. On account of resistance versus susceptibility of stock, the discarding of all rosetted nursery trees is to be strongly advised."

◇ ◇ ◇

Markets and Marketing

The first car lot shipment of pecans from Pine Bluff, Ark., was made during the past season.

The past season's shipments of walnuts from the Whittier, Cal., section aggregated in value \$450,000.

Kansas City reports that the trade in nuts has been as active as usual this season. Black walnuts sold at 90c to \$1.00, while hickory nuts ranged from 75c to \$1.75 per bushel.

Three walnut packing houses in California shipped during the recent season 165 cars. Over half of these shipments went by way of the Panama canal at a rate about 40 per cent less than that by rail.

A new plan for shipping walnuts in California, which proved very satisfactory, was tried out last season. Shipments were made in bales each containing 25 four-pound sacks. Thus the nuts reached the consumer in the original

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Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

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We have an unexcelled stock of PECANS, assorted varieties and sizes, and would be pleased to have an opportunity to make quotations on the needs of planters.

We can also furnish some extra nice Satsumas to the retail trade.

Additional stock consisting of Peaches, Plums, Grapes, Roses and Ornamentals described in our new Catalog A. Ask for it.

Summit Nurseries, Monticello, Fla.

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at "Glen Arden Farm," Showing Both the Cut and Standing Hay

Most Wonderful Growth. The Coming Forage Crop of the South. Better than Alfalfa, Red Clover or Timothy. Better because it succeeds on land too poor for those crops. Better, because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran, from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write.

G. E. Pleas Plant Co. "GLEN ARDEN FARM" CHIPLEY, FLORIDA

FOR SALE. Budded Pecan Trees, standard varieties; order now for winter delivery. Also 45 acre two year old pecan orchard; also improved farms. C. W. RANSOM, Houston Texas.

FOR SALE. Back numbers of THE NUT-GROWER. Parties desiring to complete their files should send list of what they need. The Nut-Grower Company, Waycross, Ga.

Ocean Springs Pecan Nursery

Season 1914-15

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

Satsuma Orange Trees in Quantity

To insure first-class trees, your orders should be placed early. Nurserymen will not be able to supply the demand for citrus trees this coming season.

The Best in Budded and Grafted Pecans and General Nursery Stock

Write for information and prices at once.

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Peean and Walnut Trees

Plant our hardy, northern grown Pecan and Persian Walnut trees for best results in the northern portion of the pecan area and in the far northern states. Learn about our trees and our methods of growing them. Our booklet "Nut Trees" will be sent free on request.

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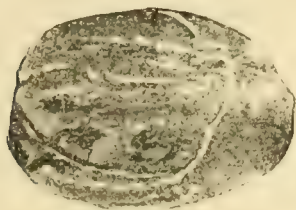
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Roses, Magnolia Grandiflora

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NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES

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Pecan Trees

Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

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RHODES DOUBLE CUT PRUNING SHEAR



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GRAND RAPIDS, MICH.

Cuts from both sides of limb and does not bruise the bark.

We pay Express charges on all orders. Write for circular and prices.

package and the mixing of grades after shipment was obviated.

◇ ◇ ◇

Belated Echoes from the Convention

R. B. Small, of Columbus, Ga., is making a good record for regular attendance at the convention.

J. A. Kernodle, of Camp Hill, Ala., came early and stayed until the convention work was finished.

C. D. Benfield, of Waycross, Ga., looked after the distribution of THE NUT-GROWER during the convention.

H. W. Smithwick, of Americus, Ga., autoed to the convention. He was accompanied by S. S. Hotchkiss, of Myrtle, Ga.

Another Georgian attained office at the convention, T. H. Parker of Moultrie having been elected a member of the Executive committee.

C. M. Griffing, of Jacksonville, Fla., who mingled with the kindred spirits at the convention, is not only an adept in absorbing information but is also generous in imparting instruction.

Theo Bechtel of Ocean Springs, Miss., was at the convention long enough to keep up his record for regular attendance. The meeting was half over before he arrived and he was gone before adjournment, but he was promoted to a vice-presidency.

◇ ◇ ◇

Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to in-

investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.



Books and Catalogs

Back yard Bee keeping; six easy lessons. The I. A. Root Co., Medina, O.

Buist's Garden Guide for 1915; 150 pages of description of garden and flower seeds. Robert Buist Co., Philadelphia, Pa.

Thornburn's Seeds for 1915; a fine catalog of high class seed, both vegetables and flowers, with prices and cultural directions.

The Buckeye Beehive; by E. R. Root. 100 pages of information regarding the management of bees in double-walled hives. I. A. Root Co., Medina, O.

Constitution and By-Laws of the Georgia-Florida Pecan Growers Association. An eight page booklet. Copies can be obtained of W. W. Bassett, Secretary, Monticello, Fla.

War Time Prices; trade catalog Austin Nursery, F. T. Ramsey & Son, Austin, Tex. 32 pages, listing a large number of choice varieties of fruits, small fruits and ornamental plants.

William P. Stark Nurseries, Stark City, Mo. Illustrated catalog and price list of fruit and ornamental trees and decorative shrubs. Gives special attention to the J. H. Hale peach.

The Pecan Business; from planting the nuts to gathering them. 30-page catalog of B. W. Stone, Thomasville, Ga. Much comprehensive information is found in this pamphlet together with description of ten of the most popular varieties of pecans.

Gardeners and Florists Annual for 1915; a valuable year book for florists, seedsmen, nurserymen and gardeners. Edited by J. Harrison

THE NUT-GROWER

10,000 Fine Pecan Trees

We have for sale this season 15,000 strong, healthy, budded and grafted pecan trees; well developed roots; Stuart variety. Special wholesale prices.

Louisiana Delta Pecan Company

R. C. ANDREWS,
Sec.-Treas.

Marshall, Tex.

Pecans, Satsumas, Grape Fruit

We have them in QUANTITY as well as QUALITY. Our stock is especially strong in large grades. Let us figure on your wants. Orders for one tree or one car load given the same careful personal attention.

Simpson Nursery Co.

Monticello, Florida

Established by G. M. Bacon in 1889. Incorporated 1903.
The Oldest Exclusive Pecan Nursery.

The G. M. Bacon Pecan Company

DeWitt, Georgia

Standard Varieties of Properly Grown Trees



Our many years of practical experience combined with the scientific study we have made of the industry enables us to supply to the best advantage the wants of our patrons.

Prompt attention to inquiries.

Send for Price List.



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VERTICAL FARMING makes available tons per acre of new plant food, ensures abundant moisture and largely increases crop yields.

Dr. G. E. Bailey, Geologist at the University of Southern California, has prepared a reading course of instruction in soils and vertical farming. We have printed it in a well illustrated book. It will be mailed

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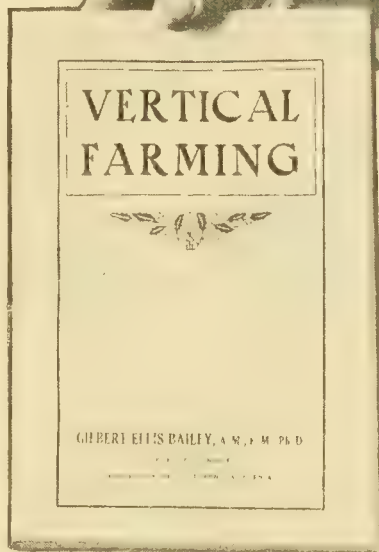
to anyone owing a farm in the United States. Get this book about soils. Work your farm to its full capacity. Know your land. Learn its composition. Use the fertilizers nature is storing beneath your 6-inch farms. Send a postal request today for Vertical Farming Booklet, 191-F. Be sure to state the acreage of the farm you own.

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◇ ◇ ◇

White River Valley, Ark., produces pecans abundantly. The low price of cotton has had the effect of diverting attention to this natural product and merchants now regard the nuts as a staple product.

◇ ◇ ◇

Citrus Importations Prohibited

The Secretary of Agriculture has issued an order prohibiting the importation from all foreign countries of citrus nursery stock, including buds, scions and seeds, except for experimental or scientific use by the Department. This action is taken to prevent the introduction into this country of citrus canker and other citrus diseases found to exist in foreign countries and liable to be introduced on nursery stock.

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Sam H. James' Announcement

This winter I shall have for sale Stuart and Moneymaker budded pecan trees, grafting and budding wood of nearly all leading kinds, also lespedeza seed. I started growing pecan trees in Feb. 1878, and have been in the business ever since. I have tested here upon my plantation nearly every known variety of pecan. I find only two varieties that are perfectly healthy and which are enormous bearers. They are Moneymaker and Carman. I have fruited these pecans for 22 years and have sold them to the multi-millionaire class in the north, and they have invariably come back for more. I have just filled Thomas A. Edison's, John D. Archbald's and J. M. Studebaker's orders. The nurseryman who is not growing these two varieties is standing terribly in his own light. Sam H. James, Mound, La.—Adv.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall
Get Our Special Prices

We also have
other varieties
and prices.

Let us know
your wants.

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We sell large soft shelled
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1, 5 and 10 pound fancy boxes.
Send for catalog.



ROOD PECAN GROVES

ALBANY, GA.

The Nut-Grower

Volume XIV

March, 1915

Number 3



If any man is able to convince me and show me that I do not think or act right, I will gladly change; for I seek the truth, by which no man was ever injured. But he is injured who abides in his error and ignorance.

—MARCUS AURELIUS.

10c per Copy

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THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., MARCH 1915

NUMBER 3

THE FOOD VALUE OF NUTS

BY MRS. W. N. HUTT

A Paper read at the Thomasville meeting of the National Nut Growers' Association

AMERICA has been called the bread basket of the world; it might just as properly be called the nut basket of the nations. I realize that I say nothing original when I say that nut bearing trees should be planted for ornament and shade; I can go so far however, as to say that no home should be without at least one nut bearing tree, and that no town should exist without at least one street being of some food bearing variety. Chestnut, even in the south of our country, is a tree of great value for the shelter of high ceilings, and for the cooling of buildings. The pine trees of the south are good for the same purpose, yet we cannot afford to neglect the chestnut, the nut bearing tree of the north.

There is a great deal of talk about the peanut territory, and it is true that the peanut plant might produce the same amount of food as it does the cotton plant. However, it is not a food material in all the year.

Archie Day has declared the plant of the year might almost change the history of the world in two generations.

With the average four-wheeled roadster, we have introduced a luxury, and well it might be with the present prices of nuts. To be sure, nut growers want to get as much a pound as possible for the nuts. From the viewpoint of the housewife it would seem that the lower the price of nuts the better it is for the world. The high price of nuts has in the past relegated them with the confections, when our object should be to make them staple articles of diet, ingredients and accessories to every course in the menu, from appetizer to satiety.

With the exception of peanuts, nuts are a more expensive source of proteid than meats, but because of their pleasing flavor they are becoming more and more used. Dietitians sometimes says that nut contain a large proportion of refuse, there being about sixteen per cent in fresh chestnuts, twenty three in dried chestnuts, twenty-seven in peanuts, forty seven in almonds and eighty-six in butternuts, but show no food that has less waste and shrinkage.

might also be pointed out that the edible parts form a highly concentrated food, containing very little water and much fat, the pecan, the richest of all nuts in fat, being about three fourths oil. Some of the nuts, the chestnut particularly, contain much carbohydrate. It does not make a successful flour when used by itself, but combined with potato or wheat flour, makes a most delightful and nutritious bread for many of the people of the east. Nor are nuts lacking in protein, the chestnut containing ten per cent; the pecan twelve; the hickory fifteen; the filbert sixteen; the hazel and the walnut seventeen; the almond eighteen and the walnut twenty.

all nuts are rich in phosphoric acid and matter. Therefore a small amount of almond is rich in all these and also in oil. It is the best of all the nuts for its quality of oil. It is the best for the building of the bones, hair, teeth, etc., and for stimulating the growth of the young animal, human or otherwise. All that would be required is the chemical analysis would be found.

[illegible]

of certain varieties of nuts enormously. One drug store alone told me that they used over fifteen hundred pounds of nuts so prepared in the last year. Of nut candies there are scores of varieties, the black walnut, perhaps, leading in favor, a candy house in Chicago buying them by the ton instead of by the pound. One does not realize the enormous amount of pistachios, almonds, peanuts, etc., that are used by these candy factories unless he sees them, as I did, piled up, filling a room as large as the average banquet hall from floor to ceiling.

Right here I should like to say that I do not believe that the increased popularity of the nut in the dietary is due to the efforts of such men as are now listening to this paper, but to the fact that woman has become more and more educated in household economies. When the time comes that all men see the value of the course in household economies for every girl in the land, whether it be in the most remote school in the back swamps, or in the most fashionable high priced city school, then shall the sale of nuts increase with leaps and bounds. No commercial organization can permanently increase the sale of any food crop. The housewives of the world must accomplish this.

The peanut, while perhaps not a true nut, is such dietetically. Its use in the school lunch basket, as peanut butter, has been of great value to the child. It is not my purpose to give recipes here, because they can be obtained in almost any cook book. However, I should like to emphasize the fact that man, woman or child can make peanut butter. If the peanuts were bought raw and the children permitted to roast them themselves or shown the delightful methods of salting them, and incorporating them into candy and popcorn balls, many a winter evening would be passed with the children around the fire side instead of the street corner.

Next to the peanut in the popular estimation of the housewife comes the hickory. This is used more in the north than in the south. Of course, its food value is without question, but its great aid to those who are endeavoring to promote community spirit is also without question. Get a group of boys and girls in a school room cracking and eating hickories and you have the beginning of a neighborhood congeniality. Like the pecan, I understand that the hickory grows in very few parts of the world. The American housewife, therefore, should appreciate that which is exclusively hers and be proud of what America has had the privilege of giving to the world.

Chestnut bread will perhaps never take the place of wheat bread, but the woman who loves to experiment will enjoy this once in a while. It has a decidedly nutty flavor similar to that of nut stuffing for chicken and turkey.

The black walnut is a very strong nut, but for that reason is best of all nuts for certain kinds of

candy and for cake. The almond, hazel nut and the English walnut combine the qualities of being a very beautiful and artistic decoration to icing, salads and cream soups, and of making those dishes a nourishing repast.

We have so many times gone into the value of nuts as compared to other foods, that I shall not go into it in detail, except to quote Hutchinson, who tells us that thirty English walnuts contain about as much fat as two and one-quarter pounds of moderately lean beef, but that two and one-half ounces of beef are equal to them in proteid. It will be necessary to consume about seven hundred walnuts in order to obtain the necessary amount of proteid required by the body for a day. The almond is of distinct value because of its poverty in carbohydrate. This makes it valuable for use in dietetic breads, its lack making its worth. The cocoanut, weighing one and one-quarter pounds, contains one-quarter pound fat, so that at the present price, fat from this source is about the same as butter.

Unfortunately, nuts are not readily digested in the stomach unless they are fresh, well-chewed, or ground. We consider it very little trouble, in fact, part of the duties of a housewife to prepare other foods so that they may be readily digested in the stomach. Why should we not give similar thought to nuts?

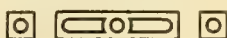
Many experiments have been conducted as to the absorbability of nuts by the body. It has been found that results compare favorably with the absorption of other foods, particularly in an ordinary mixed diet.

This brings us to the fact that it is not desirable to encourage the use of nuts after a full meal even though they may be combined with raisins, which are in themselves of high food value. They should be eaten as part of the meal or out of hand at odd times.

Looking back in history one finds that the acorn was an important article of diet among practically all the aboriginal tribes of North America. Because of its bitter and astringent qualities it has been superseded by other nuts. As has been referred to, the chestnut was of great value to the wandering tribes of Europe and Asia; the cocoanut has fed teeming millions in tropical countries and will probably continue to do so for many years to come; the brazil nut has performed a similar mission in definite parts of the world. This might be said of almost every nut. Today these nuts are being brought to perfection by the efforts of scientific men who have in mind not only their value in dollars and cents, but with true missionary spirit consider their importance as a human food. Economically considered, the nut has never received its just due. It has kept many an isolated people in meat, since hogs, squirrels, fowls, etc., would have become extinct were it not for the wild nuts to which they have found access.

As a summary, I might conclude by saying that considering the great food value of nuts it is strange that they are not more generally consumed as staples on American tables. The nut is bread, butter and meat all in one. It is served in Nature's manner of combining the nutrients, and is not only delicious but wholesome. It is packed in Nature's container, and thus will keep longer than any other food that is not cooked or otherwise preserved. No foods, except the fats of meat, butter and oil, show such an amount of calories of heat per pound as nuts, and even then, under ordinary conditions, nuts are the cheaper. As calories represent the energy nutrients

of foods, nuts are ideal eating for winter and for people engaged in muscular work. The liking of children of every sort, condition, climate, color and social status for nuts is undoubtedly because of Nature's demand for a food supplying the excessive energy they put forth in their youthful exercises and in the cell building of bodily growth. Many nuts yield a greater caloric energy than sugars and syrups, which are nearly pure carbohydrate. In fact, no other food of such high caloric energy can be safely eaten except in connection with diluting foods. Nuts are Nature's masterpiece in the vegetable world.



Is Marion County the Southern Limit of Profitable Pecan Growing in Florida?

By E. A. DAVENPORT

A Paper Read at the Thomasville Convention of the National Nut Growers' Association

IT is agreed that no State in the Union is at the present time receiving such an influx of home-seekers as Florida. Most of the newcomers are making their homes on the land and from all sections of the State come calls for help. They are a thrifty and energetic people that are coming to Florida, and fully capable of subduing the forest and building homes with no assistance from any one, but when it comes to the question of what crops, what fruits, and what nuts to plant, they need all the help that agricultural and horticultural association can give them. It follows that no inquiry by the National Nut Growers' Association could be more timely than the question, "Is Marion County the Southern Limit of Profitable Pecan Growing in Florida?" It is especially timely when new people are coming into the State as its discussion may be of great help to a large number of worthy settlers.

Under the circumstances no one can answer this question in an off-hand way with a simple "yes" or "no." The answer must of necessity be long-drawn-out, in fact some years must elapse before a positive answer can be given. Still what we want to know of the subject will, I believe, be of value to the people who are opening up farms in central and southern Florida. What we do not know may be of still greater help to some would-be pecan orchardists in the way of protecting them against failure and unnecessary loss.

In one sense of the word Marion County at the present time is the southern limit of pecan culture in Florida, no commercial groves, at least none of any consequence having been planted south of that locality for a sufficient length of time to make a test. We know that pecans have done exceedingly well in Mar-

ion County. The county now claims over one thousand acres planted to budded varieties and wherever the trees have had anything like a fair chance they have done remarkably well. The high, well-drained, rolling pine and hammock lands of that county have proven especially adapted to the pecan. The rich, sandy loam surface under-laid with clay, seems to be ideal for the formation of a strong root system. Thus the trees put on a fine stocky growth. Orchards that will not be seven years old until January, planted to Van Deman, Stuart and Teehe, have matured good crops this year in spite of a very dry spring and summer, followed by a too wet fall. Some of the Teehe trees had already borne the two previous years, in other words began showing a few nuts when they were still less than five years old.

Great numbers of seedling trees are to be found in Marion County, scattered about in field and door-yards, receiving no attention whatever, and yet most of them bearing fine crops. Some of these trees originated from improved varieties purchased at fairs and were planted with the idea that like would produce like. The result is that a number of seedlings are to be found in the county producing nuts not like the original, but as good as many of the recognized varieties.

It would hardly seem possible that Marion County, where the pecan tree grows and bears so well, could be the southern limit of profitable pecan culture. We would, on the contrary, expect to find either the tree, or the crop, or both, less satisfactory as the southern limit was reached. It would be most unreasonable to expect the pecan to grow to perfection up to a certain line and then break short

(Continued on page 38.)

The Nut-Grower

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Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

THE NUT-GROWER recently purchased several hundred copies of convention proceedings, which will be included in a list of pecan literature soon to be issued. We have sold hundreds of copies during the past two years, and the supply is likely to be exhausted long before the demand for them ceases.

◇ ◇ ◇

The Albany, Georgia, pecan district leads all other sections in the area of planted orchards of the improved varieties. They claim 5-12 of the total area of such trees. Their proportion of the recently harvested crop is doubtless still larger, as the yield for this district is given at fully 250,000 pounds.

◇ ◇ ◇

Pursuant to a call issued by Wm. P. Bullard, president of the Albany District Pecan Exchange, a number of pecan growers met at Albany, Georgia, on February 2 to discuss matters relating to the grading and marketing of pecans. A report of this meeting was promised for this issue of THE NUT-GROWER, but had not been received up to the time of going to press.

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About five years ago a railroad reached the town of San Saba, Texas, a place made famous by Mr. E. E. Risien and his San Saba pecan. For some years previous to the advent of the railroad, Mr. Risien's post office address was Rescue, Texas. This post office was discontinued four years ago, but the mail for Mr. Risien is still addressed to him at Rescue to such an extent that the department writes him to do what he can to have his letters addressed to San Saba. He in turn appeals to THE NUT-GROWER saying, "I wish you would make note of this in your paper where all will see it."

◇ ◇ ◇

Among the things which count in obtaining records of individual trees is some convenient plan for

locating permanently the individual trees of an orchard. Some years ago in the editor's test orchard the following plan was formulated. First a map of the planting was made on which records of any kind could be kept. The orchard was divided into convenient plots and regularly numbered. Then the rows of trees in each plot were numbered and finally each tree in the row. The next step was to permanently connect the map with the orchard so that the identity as well as location of any desired tree could be conveniently and accurately determined. This was accomplished by the use of three numbers painted or cut on the tree at a convenient height. With an inch chisel numbers can readily be cut which will continue permanently, while paint will wash away in time and labels are easily lost or get transferred to the wrong tree. The top number records the orchard plot, the number below it indicates the row in that plot, while the lowest figure is the tree number of that particular row and plot. This system is equally available for a large or small orchard and has a number of points in favor of its general adoption.

◇ ◇ ◇

Is Marion County the Southern Limit of Profitable Pecan Growing in Florida?

(Continued from page 37.)

off and become a failure on the other side of that line.

Thus while admitting that Marion County is in fact the southern limit of profitable pecan culture at the present time, I believe that it is only so because the culture of the nut has not been attempted south of that point on any adequate scale.

We know that seedling trees are to be found in various sections of Florida and south of Marion County. There are bearing trees in Sumter, Hillsborough, Manatee and other southern counties. Reports from Hillsborough and Manatee Counties indicate that trees from twenty to thirty years old bear only occasional light crops, but the trees have made a good growth and are apparently healthy. They seem to be valued as shade rather than nut bearers and a lack of fertilizer and proper care might have something to do with their shy bearing proclivities. I have reports of seedling trees in Sumter County, the next county south of Marion, that are bearing good regular crops. Some budded trees have been recently planted in Hernando County, in the tier of counties south of Sumter, but it is too early to report on the outcome.

In the light of what we know, I would say that Marion County is not the southern limit of profitable pecan culture. In the light of what we do not know, it would be my advice to prospective pecan orchardists located south of Marion County, to plant only in an experimental way.

(To be continued.)

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WITH THE EDITOR AND HIS CORRESPONDENTS

A Reply to Mr. Crossland

Editor NUT-GROWER:

I think it was Mr. Chas. E. Pabst of Ocean Springs, Miss., who made the statement that oats growing in a pecan grove is almost equivalent to fire sweeping through it. My own experience for three successive seasons confirms his view. I'll never plant oats again in my pecan grove. It may do to plant in rows two feet apart and cultivate for moisture, or it may do to sow broadcast if you have a spring of heavy rainfall, but these suggestions are merely problematical and I'm afraid to test either one.

The oat crop makes its heaviest draft for moisture in April and May and the pecan tree comes out for moisture at the same time, sets it fruit and makes most of its growth during those two months; then, too, the great feeding rootlet system is established about this time and anything that cuts short the development of the root growth cuts short the tree growth and the nut crop. Give the early root system a chance to develop and you may inter-crop with anything, provided you plant in rows and cultivate up to the first of August if you can.

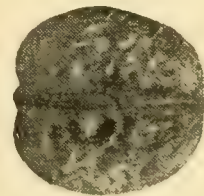
I have planted my grove to late corn for seven successive years; take nothing off but ears of corn, turning all the peavines, hay and corn under, and the grove is doing fine—yields of corn, increasing each year: in 1911, 15 bushels per acre; in 1913, 40 bushels per acre; and this from an application of 300 pounds of acid phosphate and 100 pounds of nitrate of soda per acre and the trees had no additional fertilizer. This shows the great advantages of cultivation and humus.

I think the main trouble with Mr. Crossland's orchard is oats and

insufficient cultivation, especially early in the season. I wouldn't look for nuts under the oat system, nor much tree growth either, unless good late seasons favored tree growth.

Now, as to the editor's note, I have been of the opinion some time, and a special trip last summer down the Gulf coast to inspect pecan groves, thoroughly confirms this opinion, that the idea of holding the growth of a pecan tree in abeyance for the production of nuts is erroneous. The groves bearing most heavily were the groves most heavily fertilized and most intensively cultivated; they were the darkest green in foliage, and heaviest in the current season's growth.

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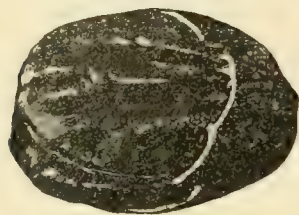
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In my own orchard I get the most nuts off the most vigorous trees. The ideal spot for a pecan grove is on the truck farm.

I regard this as the most valuable page of THE NUT-GROWER and would be glad to see the readers make full use of it in the exchange of their experiences.

P. M. HODGSON.

Stockton, Ala.



A Fine Record

Editor NUT-GROWER:

The past four years of experience in pecan budding has taught me a few things worth learning. I think I hold the high record for percentage of living buds. In the summer of 1914 I budded some wild seedling pecan trees, putting on 400 buds on the lot of trees. I used the ring method, and of the 400 buds I put on I have 388 living buds. I would like to hear from any one that can beat this per cent in budding. I also got a per cent of 70 in chip budding in the spring of 1914.

W. H. SCHWEITZER.

Hochheim, Tex.



In writing our advertisers mention THE NUT-GROWER.



Markets and Marketing

For the nine months ending September 30, 1914, the importations of almonds into the United States amounted to 6,372,117 pounds. For the same period the importations of walnuts amounted to 12,348,674 pounds.

Some demonstrations in grading pecans were given at the Thomasville convention last fall. In one case a hundred pounds of Frotschers from the Parker grove at Thomasville showed 17 pounds of the largest grade, 52 of the second and 31 of the third size.

Estimates of the present citrus crop of Florida is placed at 8,000,000 boxes. As the average car lot is about 300 boxes, this looks like something over 26,000 cars. The estimate shows that about half of

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Satsuma Oranges

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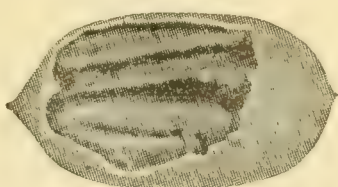
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the crop will be grape fruit. As plantings have been large for the past four years, a greatly increased production will soon be noted.

At the annual meeting of the National League of Commission Merchants held in Detroit, J. S. Crutchfield, in presenting a report, said that the greater part of the troubles encountered by the produce shippers is caused by the failure to use a standard for packages, packing and assembling and transportation. All of these features of the marketing problem are equally vital to the pecan producer.

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Items of Interest

In North Carolina a prolonged drouth cut down the promising pecan crop for 1914 to about 20 per cent of what was anticipated.

A Nelson pecan tree on the home grounds of J. B. Wight at Cairo, Ga., produced 60 pounds of nuts last season, when it was seven years old.

A tree planting movement is in progress in San Angelo, Texas. The local commercial organization is back of the work and is furnishing pecan and crepe myrtle trees at cost.

Grady county, Georgia, is developing nursery and live stock interests in connection with her pecan orchards in a manner that is attracting much attention throughout the rest of the state.

Pecan growing in California is attracting increasing attention. Parties in Sutter county are starting a commercial orchard. It is claimed that trees in that section have been bearing for the past 40 years.

The practice of cutting down pecan trees still prevails to some extent in the southwest. A local paper at Durant, Okla., protests and heads an editorial with the injunction, "Woodman, spare that pecan tree."

The increase in almond planting in California does not seem to have reached the large proportions

The native pecans of Arkansas figured in a commercial way in several localities during the past season. One town in particular woke up to the fact that their resources were being neglected, and shipped a solid car load of nuts.

A recent importation of wood oil trees from China is giving promise of commercial importance in the lower south. The tree is adapted to our warm southern climate and is said when three years old to produce a bushel of the nuts which furnish an oil used in the manufacture of varnish.

The husks of growing nuts are much affected some seasons in many districts by a small whitish "worm" or caterpillar known as the husk borer or husk-worm. On several of our trees some were collected at the Bureau of Entomology and some were sold at auction at the same time. The following are the results of the examination made by Mr. J. H. Combs, of the Bureau of Entomology, and Mr. J. H. Combs, of the Bureau of Entomology.

The caterpillar is a small, white, worm-like creature, with a brown head and feet. It is found in the husks of the nuts, and is often found in the husks of the nuts which are sold at auction. It is a very common pest of the nut, and is often found in the husks of the nuts which are sold at auction.

The difficulty of applying a good remedy for this insect tends to show that it is likely to become a very serious pest indeed. About all that can be done is to gather and promptly destroy the infested nuts as often as they are seen, and to gather wind falls and dispose of them in the same manner. For the perfect protection of the pecan orchard, however, hickory nuts and wild pecans should be also gathered when found affected and promptly destroyed. Where it is feasible to allow hogs the range of the or-

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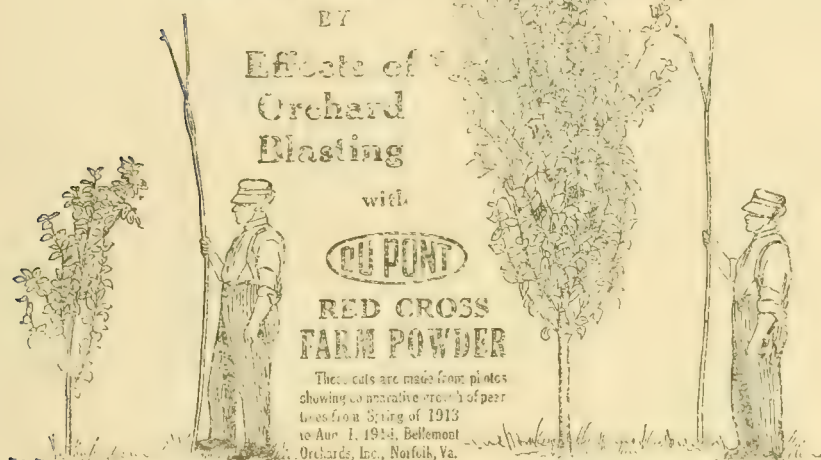
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chard, this should be done until the regular picking time.—F. H. CHITTENDEN.

◇ ◇ ◇

The Satsuma Orange

But lest I overlook the next best thing to the pecan, and one that was overlooked too long on the Gulf coast, the delicious little Satsuma orange, the big money maker, the pecan man's little friend, the little fellow who bridges over the hard financial places for the pecan man, while he is maturing his grove. Don't you fellows who are coming on behind with the advantage of the other fellow's experience, and the result of his labors in the pecan business, overlook this great fruit. We did not know about the Satsuma orange, and we are concentrating on the pecan, but you will have no excuse if you overlook planting the Satsuma between your pecan trees, or planting a block as soon as you start your pecan grove. The Satsuma begins to show profit in three years, and helps out mightily in the long wait of seven or eight years you are having for the pecan to begin declaring dividends—Exchange.

◇ ◇ ◇

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That will Grow
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Our varieties are best. Gold Medal awarded our pecans at Jamestown Exposition. Handsome pecan catalog free.

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Will be pleased to book orders now for Grafted Pecans

No Seedlings
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Proprietor
Ocean Springs, Miss.

The Nut-Grower

Volume XIV

April 1915

Number 4



WE all have to learn, in one way or another, that neither men nor boys get second chances in this world. We all get new chances to the end of our lives, but not second chances in the same set of circumstances; and the great difference between one person and another is how he takes hold and uses his first chance, and how he takes his fall if it is scored against him.

—THOMAS HUGHES.

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Plant in Groves
and Orchards

Iron Peas
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Hardy, disease-resistant. 26 other varieties. Price on any quantity.

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growing wellrooted
budded and
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Expert Propagation.
Healthy and
Hardy Stock.

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T. H. PARKER
MOULTRIE, GA.

THE NUT-GROWER

The Southern Limit of Profitable Pecan Growing

BY E. A. DAVENPORT

(Continued from last issue)

I believe that the southern limits of the pecan will be pushed well down into southern Florida, just as the northern limits have been pushed farther north than was believed possible. To avoid costly mistakes, this pushing southward into untried fields must be conducted with caution. The various named varieties must be tried out in a small way to determine their behavior before large commercial orchards are planted. Better still, promising seedlings native to the farther south region must be sought out and new varieties especially adapted to the region developed. By all means push the southern limit farther south, but let the work be done systematically and in a way that will not bring disappointment to the people who are turning the forests of Florida into orchards and farms.

Who knows what the future may hold in store? Boundary lines in agriculture and horticulture are being wiped off the map every day. Districts now regarded as outside the pecan district may a few years hence be recognized as the center of the industry. Men who are not yet very old, can remember when the talk was—nothing worth while west of the Mississippi River. But Corn Crossed the Father of Waters and Iowa and Missouri and other States in the valley of the great river became the richest agricultural section of the whole country. Another limit was drawn at the Missouri River, and men said, "You will be compelled to stop here, beyond is a wind-swept, barren desert." King Corn crossed the river, and now hundreds of millions of bushels of corn are grown every year in the heart of the great American desert. Millions of bushels of wheat, oats, and barley were grown this year under dry farm-

(Continued on page 51)

Pecan Trees Satsuma Oranges

and

Grape Fruit Trees

That are Right

SAMUEL KIDDER
Monticello, Florida

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THE NUT-GROWER

VOLUME XIV


WAYCROSS, GA., APRIL 1915

NUMBER 4

SOME OBSERVATIONS ON VARIETIES

By C. A. REED

Field Agent, Bureau of Plant Industry

 TWO questions regarding any variety of pecan should be asked and answered before that variety should be included in any planting list. These are:

1. How well can it be grown; and
2. How well can it be sold?

Who can say that either of these questions is the more important, for what does it matter how well a variety may be grown if it cannot readily be sold so as to allow a reasonable margin of profit, or how readily it may be sold if it cannot economically be grown?

The pecan possessing all of the good points has not yet appeared, nor is it probable that it ever will appear. Varieties possessing all, of what may at the time, be considered by a few as being all of the good points, in certain sections, for certain markets and in certain years, are bound to appear from time to time. And these may be most excellent varieties, but no one variety can ever meet all of the requirements in all orchards and in all markets, all of the time.

The editor has asked for reports from different individuals in distinctly different sections regarding their observations of certain varieties. If those who receive these requests will report promptly with thoughtful, brief and concise replies, the variety column should make itself very useful. The column should become a permanent feature, and in it each of the better known sorts should appear for periodic review.

The two varieties which the editor desires to have discussed in the present issue are the Stuart and the Delmas. Taking up the first of these, by asking the two questions which this article says should be asked and answered before it should be included in a planting list, and at the same time keeping in mind Judge Edwards' "acid test," we have:

THE STUART PECAN

How well may it be grown, and how well may it be sold?

FAVORABLE POINTS (of especial concern to the orchardist):

It has been tested for a long time (since 1885) and has been widely disseminated. With the planters it is now one of the most popular varieties.

It is a vigorous, healthy grower, and, so far as authentically reported, both foliage and nut hulls have been free from serious attacks of pecan scab. In fact, so far as known to the writer, a positive case of scab has never been found on this variety.

It has been reported as being hardy farther north than has any other southern variety which has been given an equal test. (Mr. J. G. Rush, West Willow, Pa., reports having gathered a few Stuart nuts in 1914 from a tree which he set in 1905 on his home grounds in Lancaster County.)

To a very large degree it is capable of shifting for itself; that is, it adjusts itself to conditions of environments to such an extent as practically to insure a crop of nuts even under very adverse circumstances.

It is an annual bearer.

While the nuts differ somewhat in shade of color and in form, and the kernels vary in plumpness and quality, depending upon the season, locality, age of trees, and, no doubt, upon other influences, Stuart nuts from the same trees and of the same season's crop are very uniform in color, size, form and in character of kernel.

FAVORABLE POINTS (of especial concern to the seller):

The nuts are usually large, attractive in appearance, uniform, and the kernels are sweet and ordinarily plump.

UNFAVORABLE POINTS (of concern to both orchardist and seller.) The nuts are not paper shells, but moderately thick-shelled.

The kernel is loosely constructed and breaks badly while being separated from the cracked shell.

A rather thick partition of astringent, cork like material, breaking readily, and lying between the

half-kernels, is with difficulty separated from the pieces of kernel. Tastes of the latter have given rise to considerable prejudice against the Stuart on the ground of astringency of kernel, which of course is entirely unfounded.

So objectionable is the Stuart pecan because of the difficulty with which it is cracked that it does not build up trade as well as do many other sorts.

The Stuart has been extensively planted and it is bound to be among the very first to feel competition. Its competition probably will be greatest with itself.

In some instances, the Stuart already has been reported as having to "beg" itself into the market.

Stuart nuts frequently germinate while still on the tree. Such nuts deteriorate quickly after being harvested.

THE DELMAS PECAN

How well may it be grown and how well can it be sold?

This is a less well known variety and not as much can be said regarding it.

FAVORABLE POINTS (of especial concern to the orchardist):

It is a very prolific bearer and the nuts are uniform in size.

It is a vigorous grower; its symmetry and beauty commend it strongly for ornamental planting.

FAVORABLE POINTS (of especial concern to the seller):

The nuts are very large, of an attractive, rich brown color, fairly thin-shelled, moderately good crackers and the kernels are usually plump.

The kernels average unusually plump for a large variety.

UNFAVORABLE POINTS:

Under certain conditions, the Delmas is very subject to pecan scab: so much so, that in the more serious case the entire crop may fall from the trees. In less severe cases only a part of the nuts will fall, while another part will be under-sized and poorly developed, and a small proportion will be entirely normal.

The Delmas is still too new for general rating. It has been tested in but a small portion of the pecan area.



PECAN ROSETTE

From an article by W. A. Orton and F. V. Rand in the Journal of Agricultural Research

ROSETTE has been rather generally recognized by growers as a serious disease almost from the inception of commercial pecan orcharding. As early as 1902 requests came to the United States Department of Agriculture for an investigation into the causes of the disease and possible methods of control. The work was at once undertaken by the senior author and carried on for about four years in connection with other work in the Southern States, but between 1906 and 1910 little attention was paid to the disease. Since 1910, and more particularly during the seasons of 1912 and 1913, the experimentation has been continued by the junior author.

The disease is well distributed over the pecan-growing territory from Texas to the Atlantic coast and from Florida to Virginia. It has been definitely seen by one or the other of the authors at Whittier, Cal.; San Antonio, Boerne, Waring, Kerrville, San Saba, Waco, Austin, McKinley, Tex.; New Orleans, La.; Ocean Springs, Miss.; Atlanta, Statesboro, Albany, DeWitt, Baconton, Thomasville, Cairo, Valdosta, and Blackshear, Ga.; Bellevue, Palatka, Sisco, Gainesville, St. Augustine, Jacksonville, McClenny, Glen St. Mary, Alachua, Lake City, Monticello, Newport and Tallahassee, Fla.; Mt. Pleasant, Denmark, Bamberg, Greenwood, Blackshear, Orangeburg, St. Matthews, Fort Motte, Cameron, Sumter, Summerton, and James Island, S. C.; Durham, N. C.; and at

Eastville, Va. Besides personal observations at the places above enumerated, specimens of pecans (*Carya illinoensis*) showing undoubted symptoms of rosette have been received from a much wider territory including Arizona, Tennessee and other States. Similar symptoms have been observed by the authors upon other species of hickory, notably the mockernut (*Carya alba* (L.) K. Koch.), and the pignut (*C. glabra* (Mill.) Spach.), also upon the butternut (*Juglans rupestris* Engelm.), the hackberry (*Celtis occidentalis* L.), and the common locust (*Robinia pseudacacia* L.).

Furthermore, pecan rosette does not appear to be limited to any particular soil type, topography, or season. We have noted many distinct and undoubted cases in the deep sand of the Florida Coastal Plain with the water table at 3 to 3 1/2 feet from the surface, farther inland in deep sand or sandy loam with the water table varying from 2 to 10 feet, in sand or sandy loam underlain by yellow, red, or white clay at depths varying from a few inches to several feet and with a varying water table, in the clay or sandy clay of washed-out hillsides, in the river bottom and alluvial soils of Louisiana and Texas, in the black upland soils of Texas, in cultivated and uncultivated land, with and without fertilization, in extremely rich and extremely poor soils, and in wet and dry seasons. In fact, for the localities personally investi-

gated, swamp land has presented the only location so far entirely exempt. It is true that wherever the soil tends to be water-soaked through a considerable portion of the growing season the pecan presents an unhealthy appearance through its failure to make proper growth and through the sickly yellow appearance of the leaves. Under such conditions the tree usually dies sooner or later. The symptoms, however, bear so little resemblance to those of rosette that even the most casual observer will not confuse the two diseases.

SYMPTOMS AND VIRULENCE OF PECAN ROSETTE

Pecan rosette first makes itself evident through the putting out of undersized, more or less crinkled, and yellow-mottled leaves, particularly at the ends of the branches. The veins tend to stand out prominently, giving a roughened appearance to the leaf blade, and the light-green or yellowish areas which give the leaf its mottled appearance occur between the veins. In these light-colored parts the tissues are thinner and less fully developed than in the normal leaf, and later in the season they frequently become dark reddish brown and dead. In many cases the intervascular tissue here and there fails to develop at all, so that the lamina is dotted with smooth-margined holes suggesting insect perforations which have subsequently healed over. These first symptoms may occur over the whole tree at once, but often one or more branches may be affected for several months before the whole tree appears involved. At this stage the foliage as a whole often presents a rusty appearance. The diseased branches usually fail to reach their normal length, so that the leaves are clustered together on a shortened axis, giving a bunched appearance to the group which led the senior author, about 1902, to apply the term "rosette" as an appropriate name for the disease. Nuts are frequently borne and carried to maturity on these branches.

In some cases the disease goes no farther. The trees may continue in this way for several seasons, or they may recover completely after showing the early early symptoms for one or more years. However, in a well-defined case where the symptoms are general over the greater part of the tree, the affected branches begin to die back from the tip during the latter part of the first season or later. At first brownish spots and streaks appear in the green bark and these dead areas increase in size until the whole end of the twig or branch dies. While death appears to start in the green bark, the cambium soon become affected and the wood and pith are usually discolored. This dying back or "staghorn" stage is followed during the same or the following season by the development of numerous lateral shoots from dormant or adventitious buds. In young vigorous trees these first shoots of the season are usually large and succulent, and the leaves are dark green and

above the normal in size. In all probability this effect is physiologically equivalent to the effect of severe pruning. Toward the middle of the season, however, the typical yellow-mottled color appears and the later-developed leaves are more or less crimped and roughened, as well as below the normal in size. Dormant axial buds of one or two series may develop into abortive shoots, and toward the end of the season clusters of short or spindling branches usually put out from adventitious or dormant buds farther back on the branches or on the main trunk. The leaves in these cases are much reduced in size and may appear as a mere skeleton with ragged edges.

This process goes on from year to year. The growth of the tree is checked, and these abnormal clusters of branches are formed only to die back each season and be followed by others. Thus a well-marked case of several years' standing presents a characteristically gnarled and forlorn appearance. Rosette in all its forms occurs in trees from seedling and budded or grafted nursery stock to trees of long-established maturity, a hundred or more feet in height, and it is one of the worst diseases known to affect pecans.

(To be continued.)



It is claimed by those who advocate dynamited holes for fruit and shade trees, that they come into bearing sooner than trees planted in the old way. This might be tested by some disinterested experiments to public advantage.



Salted Pecan New Commercial Product

Salted pecan nut meats in one-pound cartons have been introduced in a commercial way and are finding a ready market, says the New York Journal of Commerce. Heretofore salted pecans have been produced privately or in a small way for mercantile purpose, but a southern cracking concern with large facilities has started turning out the goods on a commercial scale and expects by next fall to have established a growing business in the commodity. Charles H. Gibbs, the pecan expert, said recently that the demand for the salted nut meats came largely from people who found trouble in digesting the plain kernels, but had no difficulty in assimilating those that have been salted. High grade cultivated shelled pecans of paper shell variety offered here show extraordinary size compared with similar goods available only a few years ago and readily command as high as \$1.25 a pound from the fancy grocery trade. Between this and the commercial pecan meat there are a number of grades in the thin shell nuts, varying in price from 55c to \$1.00 per pound, according to the size of the halves rated from medium to fancy.

The Nut-Grower

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3

Mr. Chas. L. Edwards of Texas, is credited with having planted a Delmas pecan in 1907 which bore twelve nuts in 1910, twice as many a year later, six pounds in 1912, three and a half in 1913 and eight and a half pounds in 1914 although the tree was cut severely for propagating wood.

◇ ◇ ◇

While potash is higher now than last year, one is not justified in reducing the amount their trees require. As worked out per acre, the increase on 2 per cent potash goods at rate of 400 pounds amounts to ten cents. Possibly other ingredients have been advanced in price as well as potash.

◇ ◇ ◇

A few weeks ago over 500 delegates and members attended the eighth annual convention of the Federation of the Trade Press Associations. This meeting impressed the fact that the trade paper of today is very different from that of a few years ago and that it has become so useful in every trade as to be now so indispensable that no one can afford to ignore it.

◇ ◇ ◇

The annual meeting of the Georgia-Florida Pecan Growers' Association, at Quincy, Fla., is likely to be held during the month of May probably about the middle of the fourth week in the month. This organization comes in close touch with the pecan interests in its territory and supplements the work of the national body by getting local co-operation, in solving problems of all kinds. Just now the standardizing and marketing of the crops is of paramount influence.

◇ ◇ ◇

Thomasville was a great meeting place during

1914 for the pecan interests. Beside various conferences, the Georgia-Florida Association met there in May and the national association in October. The attendance at these two meetings indicate that the local association appeals more favorably to the growers than the parent body, having had the largest attendance while the subjects considered were entirely of local concern. It is supposed, however, that the strenuous business conditions which intervened between these two gatherings, compromised the October attendance. For 1915, Albany, Ga., is the center at which various committee meetings and conferences have and will be held, rounding the year with the national meet in the fall.

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During the years which cover the history of modern pecan growing, there never has been a time when the industry was better able to demonstrate what it means commercially to the lower South than the present. Even the financial stress combined with the European war and tariff legislation are all serving to bring out the attractive and sound business openings the industry offers. Orchard investments in apples and oranges are popular and have been extensively advertised and sold to an astonishingly extent. Shrewd operators have of late been studying the superior merits of the pecan as an orchard proposition and are finding out that it is superior in various ways to any other horticultural field. When the details of marketing the nuts are systemized so that the selling will be as easy as it is to sell cotton, another bugbear will be disposed of and the pecan will have as wide a market as cotton itself.

◇ ◇ ◇

In this issue will be found a report of the organization of the National Pecan Growers Exchange with headquarters at Albany, Ga. This is one of the business measures looking towards the co-operative marketing of nuts for members and for others, and it is not designed for earning dividends on its modest capital stock of five hundred dollars, of which the shares are one dollar each and non-assessable. The working capital is apportioned among the members according to the tonnage of nuts handled by the exchange, and the voting privileges of members is unequal but determined by the amount of business furnished. The plan follows closely that of the California Walnut Growers' Association, which has been gradually crystalized from years of experience. There is no present question involving the financial success of the pecan grower like that of the successful marketing of his product, and there are just two ways for accomplishing it. First, by the individual selling, and, second, by co-operation which need to be in a wide and true sense. In subsequent issues, as space will permit, we expect to publish more in reference to this important movement.

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WITH THE EDITOR AND HIS CORRESPONDENTS

Poor Results from Dynamite

Editor NUT GROWER:

In renewing my subscription to your valuable paper, from which I get many valuable suggestions, it occurs to me that all information published in regard to the use of dynamite has been decidedly favorable, while our experience has been the reverse.

We first set out 40 acres of pecans without the use of dynamite, in this county in 1910 which are now beginning to bear. In 1912 we planted another adjoining 40 acres with dynamite, using from 1-4 lb. to 1-2 lb. placing it from 3 1-2 to 4 feet below the surface. The explosion would crack a small area of the surface and leave a hole below the surface about the size of a 50 gallon barrel, the soil being evidently packed in around the sides and bottom. In planting we would fill this hole with surface soil. Those planted with dynamite have never done as well as those planted without; but it may be that our soil at the time was too wet for its use, and that the results would have been otherwise had the soil been perfectly dry; or some other cause may be responsible for the difference.

We would like to know the experience of others who have actually tested it.

R. W. HOUR

Houston, Texas

Good Budding Results

Editor NUT-GROWER:

In the March number of THE NUT GROWER I notice a statement from W. H. Schweitzer of Hochheim, Texas, to the effect that in the summer of 1914 he put in 400 ring buds and got 388 of them to live. He also states that he got

70 per cent. of the chip buds to live in the spring of 1914. He did not give the number of chip buds that were made.

I wish to state that in March, 1912, I sent Mr. Charles A. Edwards of Dallas, Texas, and Mr. Meredith James, then a senior student in the Horticultural Department of the A. & M. College of Texas, to Brazoria, Texas, to work over some pecan sprouts, which were three or four years old, but which had attained the height of from four to six feet. They began budding about the first of March and continued until about the 15th, budding nearly 500 trees; using from two to five buds to the tree.

The results show that out of about 1200 buds inserted, fully 95 per cent. not only lived but forced out and made strong healthy shoots.

E. J. KYLE

College Station, Texas.



The Southern Limit of Profitable Pecan Growing

(Continued from page 46.)

ing methods, on the semi-arid uplands and along the foothills of the Rocky Mountains, where twenty years ago a man would have been adjudged insane for even suggesting that any crop could be made to grow.

Alfalfa, the queen of forage crops, which at first would grow only on the irrigated lands of the West, was for years a failure in the rain belt, but it now grows wild along the roadside in many states, and the limestone ridges of the South are beginning to take on a deeper green because of its presence. Cotton has pushed westward into the semi-arid regions of Texas and Oklahoma, where it was believed a

few years ago that the soil and climate were suited only for the production of scant grass and stock cattle. Lands in the West that in a state of nature did not produce a single tree of any kind are now the greatest producer of apples in the world. Lines of demarcation and limitation are being pushed back in every direction and the same must prove true of the pecan belt if the growers make the most of the splendid opportunities afforded by our grand southern land.

◇ ◇ ◇

Reports from Quincy, Fla., indicate that arrangements are under way for the meeting of the Georgia-Florida Pecan Growers in May.

◇ ◇ ◇

National Pecan Growers' Exchange

By WM. P. BULLARD,
Secretary Organization Committee.

I am requested to give the pecan public a report of the doings of the Marketing or Organization Committee of both the National Nut Growers Association and the Georgia-Florida Pecan Growers Association.

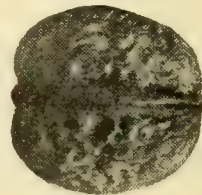
At the regular annual meeting of the Georgia-Florida Pecan Growers Association in Thomasville last May, Dr. C. A. Van Duzee, then president of the National Nut

Growers Association, urged upon the growers the necessity of organizing a proper selling agency or association that would successfully handle pecan nuts as do other organizations their products. As a result of a lengthy discussion a committee was appointed with Dr. Van Duzee as chairman. This committee had frequent meetings and in addition to securing valuable data, collected funds with which to send Dr. Van Duzee to the northern and eastern cities to investigate market conditions.

During the annual meeting of the National Nut Growers Association in Thomasville last October there was a called meeting of the Georgia Florida Pecan Growers Association when Dr. Van Duzee, chairman, made a full report of the committee's work. This report was approved and the committee continued with full power and discretion to take whatever steps this committee might deem wise and expedient, including the organization of a selling exchange, if thought wise. At the next days session of the National Nut Growers Association a report was made as to this action of the Georgia-Florida Association; this report was approved by the National body and the said committee was made the joint committee of both associations; and the committee likewise empowered to do everything in and about the organization of the selling association. This action of the National Association broadened the scope of this committee's representation and, in a word, gave to it national scope and character, thus entitling its work to full credit and support of all the pecan growers in the United States.

With such responsibilities in view the committee had meetings and finally decided that the time was opportune for the formation of a selling exchange along lines similar to the California Walnut Growers Association; the charter to be taken out in Georgia. This charter has now been applied for

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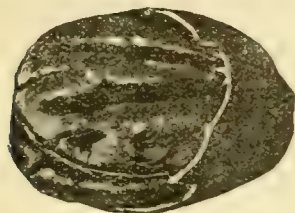
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J. F. WILSON, Editor.

Sworn to and subscribed before me this 18th day of March, 1915.

J. S. ELKINS,
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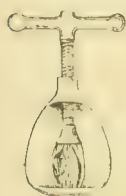
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with only such modifications of the California Association as would enable ours to come under the Georgia laws.

It will be seen from a perusal of this charter that the capital stock is practically nominal, shares par value \$1.00 and non-assessable and non-dividend paying; consequently it is not for the pecuniary profit of any one whomsoever as profit-sharing corporations go. This feature is confidently expected to give both the small and large grower complete confidence in the National Pecan Growers Exchange, as no one by virtue of directorship or office can get any advantage over the small grower living a thousand miles away. Of course it will be necessary to pay a good salary to the manager of the Exchange who will give his time to the business and who must be a man of capacity commensurate with the undertaking. Other associations, exchanges, or whatever name similar organizations go under, pay a good salary to the man who can deliver the goods. Without such a competent, paid man at the head it would be folly to attempt to do much. But aside from the manager's salary and the necessary expense attending such an enterprise, all the net profits will accrue to the members for whom nuts are sold; and each one will share in direct ratio of his nuts to the whole so sold. If A's nuts are sold for \$100 and B's for \$200 then B's share will be twice that of A's. As to how the nuts will be handled and sold, and the many incidental questions that will arise therein and thereabout—all these questions will receive due consideration; and I think it safe to assume that all matters pertaining to the successful management of the Exchange will be solved fairly, rightly, expediently, wisely; and based on the two cardinal principles—first, that pecan growers want to get maximum returns for their product; and second, that they want to receive an absolutely square deal. With these two points

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assured in the grower's mind then the Exchange should have full and hearty support.

And it is designed that this Exchange shall be, as its name implies, national in scope and application. There is no reason why this Exchange can not and should not serve the whole pecan territory from the Atlantic to the Pacific, and from the Gulf to the northern limits of successful commercial production. There should not be two; there should not be more than one such selling agency. The head office is located at Albany, Ga., that being the logical place at present from point of tonnage of the named varieties of pecans. But you will observe in the charter a provision whereby this head office may be changed should the centre of production change or the fair and economical management of the business require. It was the desire of this marketing organization committee to plan this organization on broad and equitable lines that it might appeal alike to the man in Georgia, Mississippi or Texas.

It should not require any argument to show that such an organization is the greatest essential in pecandom to-day. Up to almost the present time it has been comparatively easy to dispose of all the large nuts at very attractive prices; but the time has now come, with increased production, when it will need experience and knowledge of the market to do this. In fact, the last year has seen more or less demoralization in some sections; and what may we expect in a short while with more and more acreage coming into bearing and older orchards increasing their production, and when nuts become more plentiful in the hands of men who do not know how to go about selling them? Other lines of horticulture have found discouragement in a profitless market until they put things to rights by some such organization. And so we pecan growers are about to face the same situation. We should rally

Satsuma Orange Trees in Quantity

To insure first-class trees, your orders should be placed early. Nurserymen will not be able to supply the demand for citrus trees this coming season.

The Best in Budded and Grafted Pecans and General Nursery Stock

Write for information and prices at once.

FLORIDA NURSERIES

W. W. BASSETT, Proprietor

MONTICELLO, FLORIDA

Pecan and Walnut Trees

Plant our hardy, northern grown Pecan and Persian Walnut trees for best results in the northern portion of the pecan area and in the far northern states. Learn about our trees and our methods of growing them. Our booklet "Nut Trees" will be sent free on request.

Arrowfield Nurseries—Box N—Petersburg, Virginia

Best Time for Planting at Hand

We have an unexcelled stock of PECANS, assorted varieties and sizes, and would be pleased to have an opportunity to make quotations on the needs of planters.

We can also furnish some extra nice Satsumas to the retail trade.

Additional stock consisting of Peaches, Plums, Grapes, Roses and Ornaments described in our new Catalog A. Ask for it.

Summit Nurseries, Monticello, Fla.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

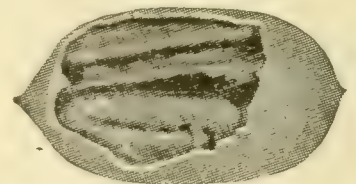
Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin Nursery

F. T. Ramsey & Son
AUSTIN, TEX.

FOR SALE. Back numbers of THE NUT-GROWER. Parties desiring to complete their files should send list of what they need. The Nut-Grower Company, Waycross, Ga.



The Pecan Business

In a concise booklet FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

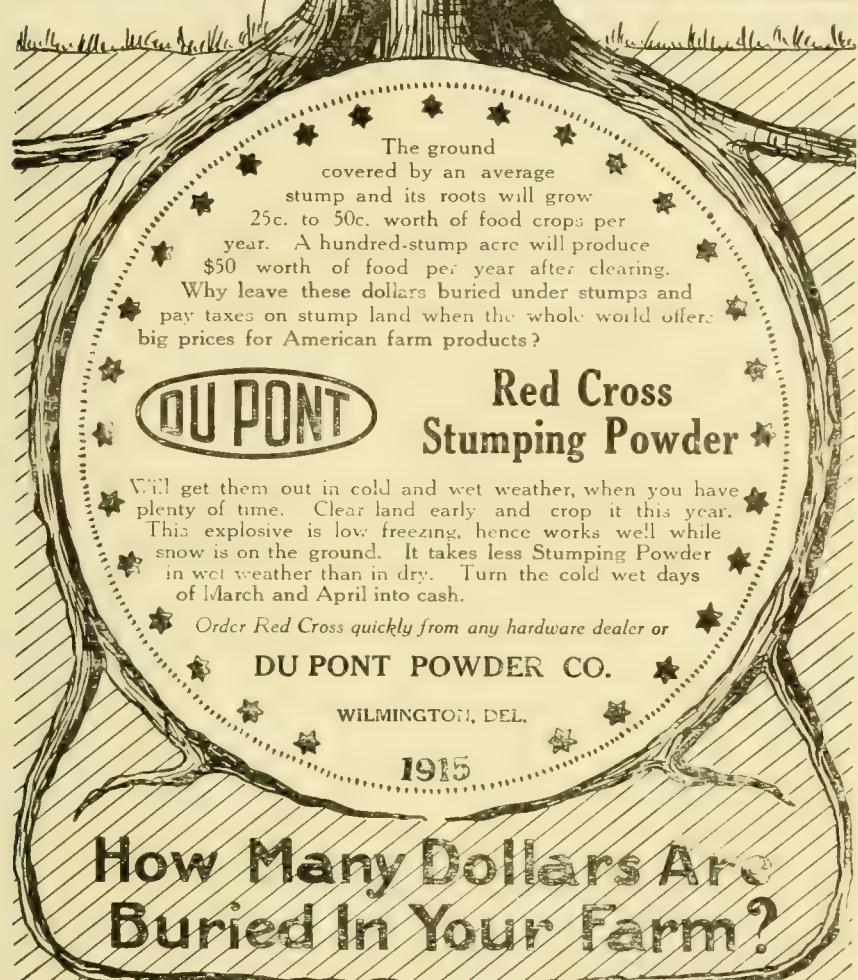
B. W. STONE :: Thomasville, Ga.

ROOD Pecan Groves

Pecan Trees and Nuts
for sale.

C. M. Rood, Pres. Albany, Ga.

EVERY STUMP HOLDS A DOLLAR



The ground covered by an average stump and its roots will grow 25c. to 50c. worth of food crops per year. A hundred-stump acre will produce \$50 worth of food per year after clearing. Why leave these dollars buried under stumps and pay taxes on stump land when the whole world offers big prices for American farm products?

DU PONT **Red Cross Stumping Powder**

Will get them out in cold and wet weather, when you have plenty of time. Clear land early and crop it this year. This explosive is low freezing, hence works well while snow is on the ground. It takes less Stumping Powder in wet weather than in dry. Turn the cold wet days of March and April into cash.

Order Red Cross quickly from any hardware dealer or

DU PONT POWDER CO.
WILMINGTON, DEL.
1915

How Many Dollars Are Buried In Your Farm?

to the support of this our selling organization if we would escape havoc of the broker and buyer pirates who invite price demoralization for their own profit.

One of the first questions of basic importance to be determined is that of grades and market standards. This matter will be taken up at a general meeting to be held in Albany sometime in April. It is to be hoped that there will be a good attendance at this meeting of representative pecan growers from every section of the country. The exact date has not yet been fixed, but as soon as it is determined I shall be glad to notify any one who is sufficiently interested to inquire of me. All who are interested in the success of this association and we hope (this means every one engaged in growing pecans) will please send in the \$1.00 membership fee at once, either to me or to any member of the committee whose name appears as one of the incorporators. We not only need all the dollars we can get but what is of quite as much value to us is the getting of every pecan grower identified with and interested in the success of this movement.

◇ ◇ ◇

Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall
Get Our Special Prices

We also have other varieties and prices.

Let us know your wants.

The Paper Shell Pecan Nursery, Ltd.

W. M. Ellison, Mgr. LAFAYETTE, LA.

Horticulture

A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$1 per Year

HORTICULTURE PUBLISHING COMPANY

11 Hamilton Place
Boston, Massachusetts

Pecan Trees

Do You Want Trees
That will Grow
and Bear
?

If so, learn about my
methods of propagating,
handling and shipping
before you decide where
to buy.

Information about pe-
can growing given for
the asking. :: ::

J. B. WIGHT
CAIRO, GA.

President Pecan---

None Better

Pecan Growing Made Easy

By planting trees dug with en-
tire tap root and well develop-
ed lateral roots. Few nurseries
have such trees.

Made Profitable

By planting only genuine bud-
ded or grafted trees, of best
quality and best producing var-
ieties. Some of the biggest,
thinnest-shelled nuts don't bear
—beware of them

Griffing's Trees are Models Root and Top

Our varieties are best. Gold
Medal awarded our pecans at
Jamestown Exposition. Hand-
some pecan catalog free.

**The GRIFFING BROS.
COMPANY**
NURSEYMEN
JACKSONVILLE, FLORIDA

Ocean Springs Pecan Nursery

Season 1914-15

Will be pleased to book or-
ders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst
Proprietor
Ocean Springs, Miss.

Established by G. M. Bacon in 1889. Incorporated 1903.
The Oldest Exclusive Pecan Nursery.

The G. M. Bacon Pecan Company

DeWitt, Georgia

Standard Varieties of Properly Grown Trees



Our many years of practical ex-
perience combined with the
scientific study we have made
of the industry enables us to
supply to the best advantage
the wants of our patrons.

Prompt attention to inquiries.

Send for Price List.



The G. M. Bacon Pecan Co.

DeWitt, Georgia

The Nut-Grower

Volume XIV

May 1915

Number 5



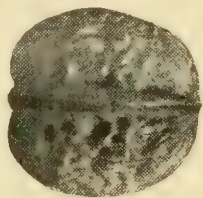
TACKLE the work just in front of you. Strive in an honest way to do the best you can, and if, having done your best, there seems to appear the hand of some overruling Power which hammers you, take it like a good piece of steel and come right off the anvil with a better temper and keener edge.

—C. W. Post.

10c per Copy

\$1.00 per Year

My Pennsylvania Grown Budded and Grafted English Walnuts will succeed with you



It is not too early to figure on your wants for fall planting.

My illustrated catalog and cultural guide will interest you.

Free for the asking.
Address

J. F. JONES

The Nut Tree Specialist
Lancaster, Pa.

Pecans, Satsumas, Grape Fruit

We have them in QUANTITY as well as QUALITY. Our stock is especially strong in large grades. Let us figure on your wants. Orders for one tree or one car load given the same careful personal attention.

Simpson Nursery Co.

Monticello, Florida

S-E-E-D-S

Mammoth White Cosmos. We have saved a very fine lot of seed from one of the choicest large-flowered strains of this plant and offer it at 15c per oz., \$1.50 per lb. If you can use several pounds will make special quotations.

Choice Mixed Mammoth Cosmos. This is of same high quality as above and contains many shades of color. Same price as white.

Calabash or Pipe Gourd. We have grown a fine lot of this seed and offer it at 10c per oz., 80c per lb.

Ricinus or Castor Bean. We have saved a fine lot of seed of many strains in both green and bronze foliage and from 5 to 15 feet in height. 1-4 lb., 15c, 1 lb., 50c.

L. H. Read & Co., Deer Park, Ala.

Items of Interest

A new oil bearing nut, yielding 45 per cent of oil that has been successfully tested in soap making has been discovered in the Philippines.

The D. & O. Lott Company, of Waycross, Ga., is offering pecan trees as premiums for purchasers of some of their suburban property who make the most attractive improvements thereon.

The College of Agriculture, University of Arkansas, Fayetteville, has issued a crop information card which gives condensed information regarding crops, soils, varieties, time of seeding, and other timely data.

A recent news letter issued by the Department of Agriculture contains an article on the control of the chestnut bark disease and details the steps toward this end now being taken by the government pathologists.

The Atlanta, Birmingham & Atlantic railroad has offered a short course scholarship at the Georgia State College of Agriculture to the winner of the Corn Club prize in each of the twelve Georgia counties through which the line passes.

The March report shows exports of food stuffs, cotton and other products amounting to \$154,159,760, as against \$75,110,776 for the corresponding month of 1914. The amount of nuts exported is so small that they are not listed separately.

Flour made from soy beans is said by the Department of Agriculture to be available for human food to as great a degree as is corn meal. This bean has for ages past been extensively used as a food by the Chinese and Japanese, being prepared in various ways. It is rich in protein and oil and contains only traces of starch. Being a legume and well suited to the soil and climate of the pecan belt, it can be grown to advantage as an intercrop in young orchards.

Budding Tool

Patented 1905

A popular tool for budding Pecans, Hickories, Walnuts, Chestnuts, Persimmons and all other trees.

Buds and Grafting Scions

of Schley, Stuart, Alley, Delmas, Van Deman, Teche, Russell, Mobile, Frotcher and Success.

Wholesale and Retail

For particulars and prices write

HERBERT C. WHITE

Putney P. O. Georgia

SHIPPING POINTS: Baconton, Ga., DeWitt, Ga., Hardaway, Ga., Albany, Ga.

Pecan Trees

We are headquarters for Pecan Trees in the Southwest and can furnish extra fine trees in large quantity for commercial orchards. Our stock runs heavy in

**Stuart
and...
Schley**

We also have a fine lot of Citrus to offer for fall and winter 1914-15.

**The Louisiana
Nut Nurseries**

Jeanerette, La.

THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., MAY 1915

NUMBER 5

THE NATIONAL PECAN EXCHANGE

A Short Sketch of Its Organization

IN the April NUT-GROWER there appeared a contribution by Mr. Wm. P. Bullard, of Albany, Ga., giving the story of successive steps leading up to the formation of the National Pecan Growers' Exchange. In the same issue an editorial comment summarized the plans and purposes of the new organization. While the National Nut Growers' Association has for five years past had a standing committee on Markets and Marketing, still it remained for the Georgia Florida Pecan Growers' Association to give definite direction to the movement for organizing a selling exchange by appointing a committee at Thomasville in May, 1914, to handle the matter. A called meeting of this association held at Thomasville during the meeting of the National Nut Growers' Association approved the work of the committee, which advised the formation of a selling organization. This action was reported later to the national body, which endorsed the movement, and a joint committee representing both associations was then formed and empowered to act.

This joint committee, after digesting the mass of information which had been assembled, adopted definite plans, which were embodied in a charter granted by the Superior Court of Dougherty county, Georgia, Albany having been selected as headquarters for the proposed organization. On April 15 a meeting was held at Albany, at which 25 charter members and others, representing a large percentage of the orchard area of south Georgia, west Florida and southeast Alabama, were enrolled, and the charter accepted and adopted. A code of bylaws was submitted by the joint committee, which had held a conference previous to the general meeting, and after a few minor changes they were adopted.

The election of nine directors then followed. Those having the deepest interest in the success of the Exchange were anxious that everything be done in such a manner as to give no occasion for criticism as to the method of selecting this board. This open-

ed the way for a lively parliamentary skirmish which resulted in the election of the directors without the handicap or embarrassment which results when the ordinary nominating committee recommends more or less of its own members for the offices. It was conceded that Messrs. C. A. Van Duzee, W. P. Bullard and B. W. Stone, all of whom had been active in the preliminary work, should be on the board of directors and they were unanimously elected. These were then appointed as a committee to nominate the other six. After a conference they named Messrs. J. M. Patterson, H. K. Miller, H. C. White, J. C. Britton, G. M. Bacon and R. P. Jackson, who were thereupon elected.

After the election of directors the subject of grades and standards was discussed. Mr. J. M. Patterson of the Patterson-Taylor Co., gave information relating to the experience of his company. Dr. J. F. Wilson told of the system of grading formulated by the Pecan Growers' League, the basis of which is founded on the number of nuts per pound, all being readily divided into large, medium and small sizes, while quality is indicated by classes A, B, C and D. Standard varieties are listed in the first three classes, while mixed lots and seedlings go in class D.

In a general discussion it developed that the 1914 pecan crop had been readily sold at remunerative prices.

A committee on grading and standardizing was appointed, which consists of H. C. White, chairman, C. A. Van Duzee, B. W. Stone, J. M. Patterson, J. C. Britton, Frank Lewis, F. T. Ramsey and C. A. Reed.

Upon adjournment, the newly elected directors held a meeting and organized by electing C. A. Van Duzee, president, B. W. Stone, vice-president, and W. P. Bullard, of Albany, secretary-treasurer.

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California walnut growers are inspecting land in Texas with a view to testing its suitability for this crop.

WINTER-KILLING REPORTED

AN unusual amount of winter killing of pecans occurred in south Georgia and north Florida during the past winter and from observation as well as from other sources we learn that the Schley probably suffered more severely than any other variety, as trees five years old were killed in some localities.

While there was no extreme cold in this territory, the winter, in fact, being milder than usual, the damage was undoubtedly done on November 20 and 21, when the mercury dropped to the lowest point reached during the winter. This cold wave came on very suddenly, while many trees—especially the Schley—were still in active growth, either from late cultivation or on account of rains which prompted growth at a time when the wood should have been ripened and the trees normant. As far as our particular locality is concerned, the damage is apparently confined to this one variety, as its habit of growth seems to render more susceptible to winter-killing than any of the other kinds.

In this connection, the Weather Bureau records give minimum temperatures as follows: In October, 1914, Albany, Ga., 36 degrees; Monticello, Fla., 35; Thomasville, Ga., 34; Waycross, Ga., 39. At all these points the minimum was reached on the 28th of the month. Frosts occurred at Monticello and Thomasville. Just three weeks later, on November 20, 21 and 23, freezing weather occurred again, the lowest temperature reached being 21, at Albany, with Monticello a close second at 22; Thomasville 23 and Waycross 25. In December Albany had a minimum of 23 degrees on the 16th, while at other points it occurred on the 12th, being 27 at Monticello, and 25 at Thomasville and Waycross. With the exception of Waycross, all these points had the lowest temperature of the winter in November.

Nursery stock and Satsuma oranges which were still in active growth when the November cold snap arrived suffered as well as orchard trees. While no detailed data is yet available as to the extent of the damage, it is conceded to be the most serious since the advent of budded trees in the localities mentioned.

This experience emphasizes the importance of such treatment of orchards as will fully ripen the wood before the arrival of freezing weather. Only a few degrees below freezing will kill tender and wood the reflow of poisoned sap carries the injury away below the frozen twigs—in many cases killing the tree.



GEORGIA-FLORIDA PECAN GROWERS CONVENTION

FORMAL announcement of the annual meeting of the Georgia-Florida Pecan Growers Association convention at Quincy, Florida, May 26 and 27, and program for the same has been received. The pro-

gram contains much that will be valuable to the grower who is looking for reliable information, and every one who can possibly attend the convention should certainly do so. The entire program follows:

WEDNESDAY, MAY 26, 10:00 A. M.

Call to Order.

Invocation, Rev. J. Marion Stafford.

Address of Welcome, W. M. Corry.

Response to Address of Welcome, W. C. Jones, Cairo, Ga.

President's Address, B. W. Stone, Thomasville, Ga.

Opportunities in Pecan Culture, Wm. P. Bullard, Albany, Ga.

WEDNESDAY, 2:00 P. M.

The Value of Well Balanced Farming in the Pecan Belt, W. L. MacGowan, Quincy, Fla.

Advertising as a Factor in the Success of the Pecan Industry, Jefferson Thomas, Jacksonville, Fla.

Question Box, giving an opportunity for any questions pertinent to the pecan industry. To be answered by the pecan experts present.

WEDNESDAY, 7:30 P. M.

Controlling the Enemies of the Pecan—

S. M. McMurran, Thomasville, Ga. (Rosette)

H. K. Miller, Monticello, Fla. (The Case-Bearer.)

C. S. Spooner, Thomasville, Ga. (The Bud-Moth.)

H. C. White, Putney, Ga. (Winter Killing.)

General Discussion of Other Enemies.

9:00 p. m. Informal reception at Elk's Club, dancing, bowling, cards and billiards, complimentary to the Association by the citizens of Quincy.

THURSDAY, MAY 27, 9:00 A. M.

The Pecan Market of the Future, Chas. A. VanDuzee, Cairo, Ga. To be followed by a general discussion of the marketing proposition.

How to Grow a Tree up to the Bearing Age, Bernie A. Fohl, Fitzgerald, Ga.

How to Grow First-Class Nuts, B. W. Stone, Thomasville, Ga., W. W. Bassett, Monticello, Fla.

Miscellaneous Business.

Selection of place for next meeting.

Election of officers.

THURSDAY, MAY 27, 2:00 P. M.

This afternoon will be devoted to an automobile ride complimentary to the members of the Association by the Board of Trade to points of interest in Quincy and Gadsen County, giving an insight into the greatest Sumatra-leaf tobacco section in the United States. Refreshments at halfway stop.

It is the purpose to put as much of profit and pleasure into these two days as is possible. Quincy is noted for its hustling, hospitable, wide-awake citizens, and they will do all in their power to make the meeting a success.

Ample hotel and boarding house facilities will

be available at reasonable prices to comfortably care for all who will be present.

Every one interested in nut growing is most cordially invited to be present.



SOME OBSERVATIONS ON VARIETIES

STUART

The Stuart is one of the varieties of pecans I have recommended for planting in North Carolina. It has been more widely set in this state than any other variety. The tree is a fine, upright grower here and makes a beautiful tree. It has, however, not proved to be as vigorous a grower as Schley and Frotcher. It is less affected by leaf diseases than most other sorts. Stuart has not been one of our phenomenal yielders, but its average production has been very good. The nuts run smaller than they do in the more southern states. Last year (a very dry season) the average weight of our crop of Stuarts from seven year old trees was 67 nuts per pound. The nuts of Stuart are unusually well filled, but there is a sentiment here in favor of other varieties with thinner shells.

DELMAS

I did not set any Delmas trees in our original planting and did not obtain trees of this variety until three or four years later. Consequently we have no bearing records of this variety. I saw some very fine Delmas nuts produced last fall at Goldsboro, N. C.—W. N. HUTT.



STUART

The Stuart pecan is making an excellent record in Texas. The plantings of this variety may be found here and there over a wide area, extending from Red river on the North to the Gulf on the south and from the Louisiana line on the east to localities well to westward and southwestward from Dallas. This variety has also been worked extensively on native trees. In most cases proper care has been given and where this is the case trees usually begin to bear in three to four years, while buds on native trees make a showing of first fruits a little earlier, and increase their product more rapidly. Most of the transplanted trees are under ten years old and buds on native trees still younger. The man with native trees on his land has been slow to move; he had to be shown; but the pinch of hard times now on the country has set him to thinking in little more lively fashion. He is beginning to feel the need of a home product that will help him to hold his cotton crop.

At Marshall, Texas, are some Stuart trees about 20 years old that give an average annual product of more than 100 pounds, which all sell readily at 75 cents a pound. Thus far, I have heard of no Stuarts selling for less than 50 cents a pound.

The trees grow well here, making good resistance to drouth and blizzard, and nuts ripen early.

DELMAS

The Delmas pecan is not grown to the same extent as the Stuart, being a later introduction. It was handicapped, too, with a reputation for being subject to scab. For a long time Texas nut growers did not know what scab is and all of us were afraid of it. So, most of us let the Delmas severely alone. A tree of it came to me on an order for Schley, and when the tree began to bear I was gratified over the nurseryman's mistake, for it has proved better suited to our conditions than the Schley. It makes a beautiful tree, with large, dense foliage, and is a splendid producer on both transplanted and native trees. Since our section has so far proved practically immune from scab, the Delmas is fast increasing in popular favor. Age for age and tree for tree it leads the Stuart just a little. The nuts are fully as large as the Stuart, crack better and I think the kernels a bit superior in quality. At this writing, if I were restricted to growing only one variety of pecan, it would be the Delmas. Buds from my trees placed on a considerable number of natives in this neighborhood, 3 to 5 years ago, have given satisfaction in every instance. It seldom fails to bear the third year from transplanting and not infrequently shows a few nuts the second year when worked on natives.—CHAS. L. EDWARDS.



H. E. VAN DEMAN DEAD

Prof. Henry E. Van Deman, widely known as one of the most prominent pomologist in this country and a specialist in pecan culture, died at his home in Washington, D. C., on April 28.

Prof. Van Deman was a native of Ohio. He served through the civil war with the volunteer troops of that state. His services as a judge in fruit exhibitions were greatly in demand, and his work along this line covered nearly every state in the Union. He served for a number of years as Chief of the Division of Pomology.



HERE AND THERE

Dr. C. E. Earnheart, a county farm demonstrator in Oklahoma is urging the planting of pecans and is giving publicity to statistics and information bearing on the industry.

The Santa Cruz Valley Walnut Growers' Association has been organized at Tucson, Ariz. Reports indicate that about 10,000 trees have been set in three orchards this spring.

In New Mexico the planting of pecans is receiving attention from the Farm Extension Department of the State College. A bulletin has recently been issued bearing on the subject, from which it appears that the dry climate of that state is a handicap to some extent.

The Nut-Grower

Published monthly by The Nut-Grower Company

Entered as second-class matter November 20, 1911, at the post office at Waycross, Ga., under the Act of March 3, 1879.

Subscription Rates

In the United States and Mexico, \$1.00 per year; in Canada and other foreign countries, \$1.12.

No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

Vol. 3

Indiana reports a pecan tree which produced 558 pounds of nuts in 1914, which sold for \$88.20 in the open market.

◇ ◇ ◇

Nuts, like cheese, supply a very concentrated food. As a rule they are not expensive, so their use in various dishes counts for economy.

◇ ◇ ◇

Our agricultural exchanges are an important feature of our working equipment. The Prairie Farmer of Chicago is a recent addition to our list.

◇ ◇ ◇

The magnitude of operations in the selling of pecan orchard propositions is illustrated by the success attending one of the Chicago companies which has sold to seven hundred persons.

◇ ◇ ◇

The building of a pecan warehouse and a drying plant at Putney, Ga., inaugurates a chain of institutions which will provide needed facilities for taking care of future crops in that locality.

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In the early part of 1911 a number of 4 to 5 foot Teche trees were used in planting a forty acre orchard in Pierce County, Ga., which by the way is in the Waycross Pecan District. In the fall of 1914 a number of these Teche trees bore a few nuts.

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From several localities we hear of trouble with pecan trees, which from descriptions given, is caused by borers. The damage is inflicted before the presence of the insect is known. Preventive measures are important, while the remedy is simply to dig them out when discovered.

While we have not yet heard of the method of

ringing trees being tried on the pecan to increase productiveness, still we think some bold experimenter would be justified in trying it on some of his seedling or other trees which are not giving a good account of themselves. Some trees like some people, need the discipline of misfortune and trial, in order to develop latent and desirable qualities.

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Their presence in sound health trees is rare as compared with trees which have sustained injury which makes an opening for them to get into the tree. Tree wounds should be prevented as far as practical, and when discovered they should be given such a treatment as will insure early healing. Paint helps in such work.

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The march of progress seems to demand increasing attention to the necessity for truth telling, not only in advertising but in other ways as well. While it is impossible for an editor to verify every item he uses, he relies upon the integrity and ability of his co-workers to give his readers a square deal. Facts are in demand and they are replacing theory to the advantage of all concerned.

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Feature stories of varieties, orchards and of pecan men who have distinguished themselves in lifting the nut growing industry up to its present position, will furnish interesting and valuable reading in subsequent issues of THE NUT-GROWER. Another forward step will be increased space and attention given to the marketing problems, which during the next few years will be a live subject.

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During the breeding season of 1913 Mr. C. Forkert of Ocean Springs Mississippi made thirty-five different pollinations of pecans using about a dozen varieties in making the crosses. Nuts obtained from these hybrids were planted the following year and as fast as the seedling produces mature wood it is being budded and grafted on to older trees, thus gaining several years time in learning the relative merits of the new varieties thus obtained.

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The division of the pecan territory into well defined districts, territorially, is one of the things which THE NUT-GROWER has repeatedly urged. In illustration of the importance of this proposal it may be stated that the Albany district is supposed to contain between forty and fifty thousand acres of orchards. What the public wants to know is, how many and what Georgia counties are included in this district? Are Americus, Cairo, Moultrie, Thomasville and Valdosta, each having large acreage in pecans, included or not? This subject was suggested to the committee which arranged the program for the Quincy meeting, and may possibly come up under the head of miscellaneous business.

Pecan Trees

Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
Box 21. Macclenny, Fla.

SATSUMAS

OUR stock of Satsuma orange trees for this season are trees worthy of the name; not little plants or switches. They are two year tops on four year (transplanted) stocks and have a root system that will make failure impossible.

They must be seen to be appreciated. 20,000 in stock. Catalog free

Jennings Nursery
Jennings, La.

Finest Pecan Trees

Budded or Grafted

Satsuma Orange, Grape Fruit
Miscellaneous and Ornamental
Nursery Stock grown by
Summit Nurseries, Monticello, Fla.
Ask for Catalog

The W. B. Dukes Pecan Farm

Moultrie, Georgia

Growers and
Shippers of

FANCY PAPER SHELL PECANS

One million grafts and buds of Schley
Stuart, Delmas and Moneymaker.
Write for favorable prices.



WITH THE EDITOR AND HIS CORRESPONDENTS

A Successful Orchard

Editor NUT-GROWER:

I have read of several of the experiences of nut growers through your columns and it occurred to me that you would perhaps be interested in the experience of the Keystone Pecan Orchard Company.

This company was organized in the winter of 1907 in Philadelphia, Pa., and purchased from Mr. O. P. Mears, of Baconton, Ga., a six year old seedling grove of sixty acres, which lies adjoining the Barnwell grove, about a mile and a half southwest of the village of Baconton, in the Flint river valley.

The first step was to cut back the trees preparatory to budding in the following summer. In the summer of 1907 we put in an average of two to three buds to the tree; thirty acres in Schley and ten each in Frotcher, Van Deman and Stuart. The last buds were put in in the summer of 1909—this gave us a perfect stand.

The trees were carefully pruned and the heads shaped up symmetrically. Although top-worked, it would take an expert to discern that the budding had not been done at the crown.

We got a few sprinkling nuts in 1909 and 1910. In 1911 the crop from about 1,600 trees ran to exactly 1,076 pounds. In the following year, 1912, the yield ran up to 3,400 pounds; in 1913 to 3,800 pounds and in the past season, 1914, to approximately 8,000 pounds.

During the past season, trees which were budded in 1907 and got well under way in 1908 produced by measure as high as 26 pounds of Schley nuts. A fair average for trees of this age of budded growth was around 12 to 15 pounds. It should be noted here

that the extremely dry season had the same effect upon our Frotchers as was experienced generally through this section of the pecan belt—the Frotcher trees cast practically their whole crop. The Stuarts were injuriously affected also and the nuts were considerably under size. With a fair average throughout the orchard the production this past season would have run well up to six tons.

We have generally pursued the policy of clean cultivation in our orchard, with light harrowing until midsummer and laid by with cowpeas. This year we have sowed the whole orchard with hairy vetch. At first we planted cotton and corn, but the shade from the trees has made this unprofitable for the past four years. We have limed once, 1,000 pounds to the acre, harrowed in early in the spring, and have fertilized the trees with a 5-6-7 mixture put down at the rate of ten pounds to the tree, usually in two applications.

We have usually sold f. o. b. Baconton at prices which for the whole period would average up a fraction below 40c.

Our development has been in charge of Mr. O. P. Meares, a very capable orchardist, and was for several years under the observation and advice of Mr. Herbert C. White, to whose good judgment much of the success of the enterprise is due.

The investment stands the owners in about \$15,000, not counting interest, and in its eighth year from improvement has demonstrated, in a year when the seasons were bad for at least half of the grove, an earning capacity of 5 per cent on an investment of \$60,000. What the future holds in store is to be seen, but as an orchard proposition the showing above might

be accounted a very satisfactory one. At the same rate of development the income from the property eight years hence, even at a much reduced price for the product, will justify the sanguine view taken by the owners way back in 1907.

JAMES D. EVANS.

Florence, S. C.



Try Breeding

Editor NUT-GROWER:

That article I wrote on Breeding Pecans, I hope, has had the effect of stimulating others to try their hand also. Now is a very good time to begin studying what varieties would be apt to blend the best. Reports of this nature will make interesting reading matter for your journal. In this line my work is already laid out as follows:

Ouliwon x Banquet.

Squirrel's Delight x San Saba Improved.

Western Schley x Eastern Schley

E. E. RISIEN.

San Saba, Tex.



As to Dynamited Holes

Editor NUT-GROWER:

I have a clipping from a recent edition of THE NUT-GROWER of a letter from R. W. Houk of Houston, Tex., in which he describes the results he has obtained on blasting for planting pecans.

He states, "using from 1-4 pound to 1-2 pound, placing it from 3 1-2 to four feet below the surface, the explosion would crack a small area of the surface and leave hole below the surface about the size of a 50 gallon barrel, the soil being evidently packed in around the sides and bottom." He later states the possibility of the soil being too wet at the time of blasting. Unquestionably the soil was too wet or an unsatisfactory grade of explosive was used. I have yet to find a dense clay that is not thoroughly shattered to the surface when in a dry condition by a 1-2 pound charge of the lowest strength dynamite made. All of our literature points out emphati-

cally that subsoils should not be blasted when wet and we know, from the enormous number of growers who have refused to plant pecans on clay soils without blasting and the enormous benefits they have gained from correct blasting, that our contentions are entirely proved. In view of the fact that the growers and nurserymen of southern Georgia have practically all adopted the use of dynamite, I am surprised to find this clipping in your journal and would be glad indeed to see a statement from yourself or from another of your correspondents, in your columns explaining why Mr. Houk's results have been so unsatisfactory.

J. H. SQUIRES.

Editor Vertical Farming.

Wilmington, Del.

[The Editor is inclined to think that Mr. Houk's failure to secure satisfactory results is largely if not entirely due to the moist condition of the soil when the explosive was used. In all cases coming under his observation the use of dynamite has produced good results when the soil was in proper condition.—EDITOR.]



Teche an Early Bearer

Editor NUT-GROWER:

I notice editorial reference to Mr. Chas. L. Edwards' tree. I have a Teche, planted the winter of 1910-11, from which I gathered 18 well developed nuts in 1913, and in 1914 I gathered 68 nuts. The tree is four years old in the ground this past winter; was a 3 to 4 foot size when planted. I understand that the Teche is one of the earliest bearing varieties, however. The 1914 nuts were considerably larger than the 1913 nuts. I have not cut any bud wood from the tree and would not for the next two or three years.

THOS. W. GILMER.

Bay Minette, Ala.



Plant a Nut

Z. F. YOST, Pontiac, Ill.

Man, plant a nut! Go, plant a nut! Uproot "why" and "if" and "but!" Just plant a nut!

Boy, plant a nut! Say, plant a nut! Be your home a hall or hut, Run, plant a nut!

Wife, plant a nut! Come, plant a nut! Endless are your duties, but Stop! Plant a nut!

Girl, plant a nut! Do plant a nut! Cease your, proud, vainglorious strut And plant a nut!

Judge, plant a nut! Mind, plant a nut! Dig yourself from out the rut, Then -plant a nut!

Doe, plant a nut! Yes, plant a nut! Swing the gate; the office shut, To plant a nut!

Priest, plant a nut? Lo, plant a nut! *Sic itur ad astra: ut, Tu!* Plant a nut!

Prof., plant a nut! E'en plant a nut! Never mind the mud! Tut! Tut!! Hike! Plant a nut!

You plant a nut! I plant a nut!

Let that useless tree be cut!

There plant a nut!



Books and Catalogs

Pecans; 8-page leaflet by W. P.

KEYSTONE Pecan Orchard Co.



Producers and Exporters of fine
PAPER SHELL PECANS



OFFICES:

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Groves: Baconton, Ga.



VARIETIES:

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Stuart

Samples and prices on request.
Wholesale orders solicited.

FOR SALE. Back numbers of THE NUT-GROWER. Parties desiring to complete their files should send list of what they need. The Nut-Grower Company, Waycross, Ga.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

PECAN TREES

Budded Paper
Shells.

BEST VARIETIES
Expert Propagation.
Healthy and Hardy Stock.

Write for Prices
T. H. PARKER
MOULTRIE, GA.

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

OCEAN SPRINGS, MISSISSIPPI

Nut Growers' Organizations

The National Nut Growers' Association, W. N. Hutt, President, Raleigh, N. C.; J. B. Wight, Secretary, Cairo, Ga.

Georgia-Florida Pecan Growers' Association, W. W. Bassett, Secretary, Monticello, Fla.

Northern Nut Growers' Association, W. C. Deming, Secretary, Georgetown, Conn.

The Pecan Growers' League, J. F. Wilson, General Manager, Warsaw, Ga.

Albany District Pecan Exchange, Wm. P. Bullard, President, Albany, Ga.

Southeastern Pecan Nurserymen's Association, Wm. P. Bullard, Secretary, Albany, Ga.

The National Pecan Exchange, Chas. A. Van Duzee, President, Cairo, Ga.

Bullard, Albany, Ga.; a reprint from the Albany Herald.

My First Season's Experience with the Honey Bee; 12-page leaflet; the A. I. Root Co., Medina, O.

Harrison's Nurseries, Berlin, Md. Finely illustrated 50-page catalog, listing select fruit trees and shrubbery.

The Moncrief Orchard Book; a 32-page trade catalog issued by the Winfield Nurseries, Winfield, Kans.; shows the superior value of pedigreed trees.

Ready Built House Company, Portland, Ore. Book of designs of houses for which they furnish materials cut to dimensions for complete construction.

Thornburn's Seeds for 1915; catalog of high class seeds, both vegetable and flower, with cultural directions; 150 pages. J. M. Thornburn & Co., 53 Barclay St., New York.

Agriculture of Massachusetts; sixty first annual report of the State Board of Agriculture for 1913; 500 pages; illustrated; cloth. Contains various reports and papers of permanent value. Wilfred Wheeler, secretary, Boston, Mass.

Pecan Growing in Georgia; Bulletin No. 82 of the Georgia State College of Agriculture; by J. William Firor, adjunct professor of Horticulture. This bulletin assembles general information for the public.

Bread from Stones; by Cyril G. Hopkins, is an eight page pamphlet published by the Agricultural Experiment Station at Urbana, Ill. It treats of the use of lime as a renovator of soils. Copies can be obtained of the Liveoak Limestone Co., Jacksonville, Fla.

Proceedings of the fifth annual meeting of the Northern Nut Growers Association held at Evansville, Ind., August, 1914. 130 pages, containing reports, addresses, and various discussions, as well as names of officers, committeemen and members.

Small Fruits and Berries; Bulletin

60,000 Pounds of... Pecans

Is the estimate of our 1914 crop made by those who know.

Our crop consists of many of the finest of the standard varieties of pecans.

We are offering these choice nuts for sale either in bulk or in small lots. :: :: ::

For price or other information, write to

The
G. M. Bacon
Pecan Co.
DeWitt : Georgia

PECAN TREES

Our Specialty is growing well rooted budded and grafted trees of best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

tin No. 4 of the Massachusetts State Board of Agriculture, Boston, Mass. This is an illustrated pamphlet of 150 pages treating various subjects in a practical manner. It contains an article on nuts in that state, recounting the difficulties which have in the past prevented their more general culture. It also gives a table contrasting the food value of nuts with that of other foods.



Markets and Marketing

Final estimates and report from the 1914 pecan crop in the Albany, Ga., district show that it was not far from 150 tons.

The value of fruit and nut importations during 1914 was \$60,000,000. Over a quarter of this great sum represented nuts.

Since California walnut growers organized their marketing association the prices received have increased nearly 50 per cent.

A prominent Georgia pecan grower has already sold his 1915 crop at an advance of about a cent a pound over the price received last year.

The California walnut crop now averages about 25,000 tons annually. Prices seem to be pretty well established and the producer usually receives satisfactory prices.

The Albany District Pecan Exchange has established permanent headquarters for displaying products in the Woolfolk building, Albany, Ga. W. P. Bullard, is president of this organization.

At a meeting of pecan men at Albany, Ga., a few days ago one of the largest producers, in telling the story of the successful marketing of carlot shipments, said that he could have readily sold twice as many



Personal Mention

Mr. T. H. Parker, of Moultrie, Ga., obtained an average of 12 pounds per tree from his pecan orchard at 11 years from planting. As his trees are set 25 to the acre and he obtained 50 cents a pound for the nuts in his home town, the

THE NUT-GROWER

Satsuma Orange Trees in Quantity

To insure first-class trees, your orders should be placed early. Nurserymen will not be able to supply the demand for citrus trees this coming season.

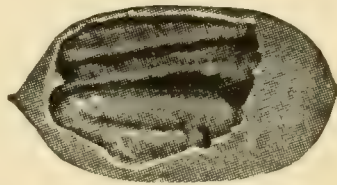
The Best in Budded and Grafted Pecans and General Nursery Stock

Write for information and prices at once.

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The Pecan Business

In a concise booklet **FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

B. W. STONE :: Thomasville, Ga.

Rood Pecan Groves

Pecan Trees and Nuts
for sale.

C. M. Rood, Pres. Albany, Ga.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

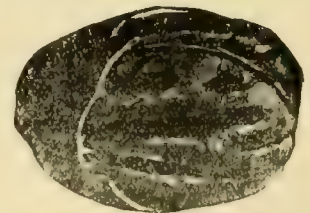
Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin Nursery

**F. T. Ramsey & Son
AUSTIN, TEX.**

SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

**P. J. Berckmans Co.,
FRUITLAND NURSERIES,
AUGUSTA, GEORGIA.**

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

Pecan Trees Satsuma Oranges

and

Grape Fruit Trees

That are Right

**SAMUEL KIDDER
Monticello, Florida**

Annual Convention Georgia-Florida Pecan Growers Association

Quincy, Fla.

May 26-27, 1915

If you are in any way interested in the growing of pecans it will pay you to go to this convention. The biggest attendance in the history of the Association will be there and a fine program for your benefit has been arranged.

Splendid automobile roads from every direction into Quincy. Ample accommodations, reasonable rates. For information write

**B. W. Stone, President, Thomasville, Ga.,
or Frank W. Lloyd, Sec'y Board of
Trade, Quincy, Fla.**

Pecan and Walnut Trees

Plant our hardy, northern grown Pecan and Persian Walnut trees for best results in the northern portion of the pecan area and in the far northern states. Learn about our trees and our methods of growing them. Our booklet "Nut Trees" will be sent free on request.

Arrowfield Nurseries—Box N—Petersburg, Virginia

5,000 Stuart Pecan Trees

**6 to 9 Feet Tall
Get Our Special Prices**

We also have
other varieties
and prices.

Let us know
your wants.

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Nursery, Ltd.**

W. M. Ellison, Mgr. LAFAYETTE, LA.

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**A Magazine of Trade News
and Information**

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

*PUBLISHED WEEKLY
Subscription \$1 per Year*

**HORTICULTURE
PUBLISHING COMPANY**

11 Hamilton Place
Boston, Massachusetts

crop was evidently a profitable one.

Mr. W. W. Lambdin, until recently a member of a prominent law firm at Waycross, Ga., has been appointed judge of the United States Court for the Southern District of Georgia. Mr. Lambdin has for several years been giving close attention to the pecan and is numbered among the patrons of THE NUT-GROWER. Mr. L. A. Wilson, another member of the same firm has made a substantial start with an orchard which he will gradually enlarge.

Mr. G. M. Brown, of Van Buren, Ark., is doing valuable constructive work in testing the adaptability of pecan varieties to that section of the country. While he has found that practically all of the popular varieties will grow there, he has also discovered that some of them bloom so early that the bloom is destroyed by the late frosts, while others require a longer growing season than his locality possesses, so that immature nuts are caught by freezing weather in the fall. Between these extremes he is finding others which regularly produce well.

◇ ◇ ◇

Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

Pecan Trees

Do You Want Trees
That will Grow
and Bear
?

If so, learn about my
methods of propagating,
handling and shipping
before you decide where
to buy.

Information about pe-
can growing given for
the asking :: ::

J. B. WIGHT
CAIRO, GA.

President Pecan---

None Better

Pecan Growing Made Easy

By planting trees dug with en-
tire tap root and well develop-
ed lateral roots. Few nurseries
have such trees.

Made Profitable

By planting only genuine bud-
ded or grafted trees, of best
quality and best producing var-
ieties. Some of the biggest,
thinnest-shelled nuts don't bear
—beware of them

Griffing's Trees are Models Root and Top

Our varieties are best. Gold
Medal awarded our pecans at
Jamestown Exposition. Hand-
some pecan catalog free.

**The GRIFFING BROS.
COMPANY**
NURSERMEN
JACKSONVILLE, FLORIDA

Ocean Springs Pecan Nursery

Season 1914-15

Will be pleased to book or-
ders now for Grafted Pecans

No Seedlings
Send for Price List

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Proprietor
Ocean Springs, Miss.

Established by G. M. Bacon in 1889. Incorporated 1903.
The Oldest Exclusive Pecan Nursery.

The G. M. Bacon Pecan Company

DeWitt, Georgia

Standard Varieties of Properly Grown Trees



Our many years of practical ex-
perience combined with the
scientific study we have made
of the industry enables us to
supply to the best advantage
the wants of our patrons.

Prompt attention to inquiries.

Send for Price List.



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DeWitt, Georgia

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The Nut-Grower

Volume XIV

June 1915

Number 6



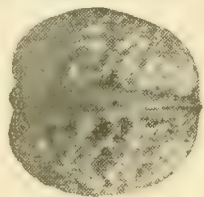
THE men whom I have seen
succeed best in life have al-
ways been cheerful and hopeful
men, who went about their busi-
ness with a smile on their faces,
and took the changes and chan-
ces of this mortal life like men,
facing rough and smooth alike
as it came, and so found the
truth of the old proverb that
“good times and bad times and
all times pass over.”

—CHARLES KINGSLEY.

10c per Copy

\$1.00 per Year

My Pennsylvania Grown Budded and Grafted Eng- lish Walnuts will succeed with you



It is not too early to figure on your wants for fall planting.

My illustrated catalog and cultural guide will interest you.

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Pecans, Satsumas, Grape Fruit

We have them in QUANTITY as well as QUALITY. Our stock is especially strong in large grades. Let us figure on your wants. Orders for one tree or one car load given the same careful personal attention.

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S-E-E-D-S

Mammoth White Cosmos. We have saved a very fine lot of seed from one of the choicest large-flowered strains of this plant and offer it at 15c per oz., \$1.50 per lb. If you can use several pounds will make special quotations.

Choice Mixed Mammoth Cosmos. This is of same high quality as above and contains many shades of color. Same price as white.

Calabash or Pipe Gourd. We have grown a fine lot of this seed and offer it at 10c per oz., 80c per lb.

Ricinus or Castor Bean. We have saved a fine lot of seed of many strains in both green and bronze foliage and from 5 to 15 feet in height. 1-4 lb., 15c, 1 lb., 50c.

L. H. Read & Co., Deer Park, Ala.

Report of the Committee on Resolutions

At the meeting of the Georgia-Florida Pecan Growers' Association the committee adopted resolutions as follows:

Resolved, first, That the Georgia-Florida Pecan Growers' Association is indebted the local board of management of the City of Quincy and the good citizens at large for the very hospitable manner in which it has been so royally entertained.

Resolved, second, That we endorse heartily the plans and methods of the National Pecan Growers' Exchange and urge the importance of active co-operation on the part of all pecan growers in order that successful marketing methods may be established and maintained.

Resolved, third, That we congratulate the members of this association on the continued and substantial development of the pecan industry in our territory, and acknowledge our indebtedness to the pioneer workers and all the organized agencies which are rendering material aid in various ways.

◇ ◇ ◇

Mr. J. B. Seanor of Fitzgerald, Ga., has top-worked a number of his Jewett trees to more modern varieties.

◇ ◇ ◇

Date of Convention Fixed

An important meeting of the Executive Committee of the Nation Nut Growers' Association was held at Quincy, Fla., May 26. Representatives of the Albany District and several others were in conference with these officials in planning for the 1915 convention.

President Hutt's desire is that this Albany convention be made a top notcher in the history of the association. The date selected is Wednesday, Thursday and Friday of the last week in October, being the 27, 28, and 29th of the month.

◇ ◇ ◇

Failing orchards may be rejuvenated by blasting between trees to loosen the subsoil throughout the feeding area of the roots.

Budding Tool

Patented 1905

A popular tool for budding Pecans, Hickories, Walnuts, Chestnuts, Persimmons and all other trees.

Buds and Grafting Scions

of Schley, Stuart, Alley, Delmas, Van Deman, Teche, Russell, Mobile, Frotscher and Success.

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For particulars and prices write

HERBERT C. WHITE

Putney P. O. ∴ Georgia

SHIPPING POINTS: Baconton, Ga., DeWitt, Ga., Hardaway, Ga., Albany, Ga.

Pecan Trees

We are headquarters for Pecan Trees in the Southwest and can furnish extra fine trees in large quantity for commercial orchards. Our stock runs heavy in

**Stuart
and...
Schley**

We also have a fine lot of Citrus to offer for fall and winter 1914-15.

**The Louisiana
Nut Nurseries**

Jeanerette, La.

THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., JUNE 1915

NUMBER 6

GEORGIA-FLORIDA GROWERS MEET AT QUINCY INTERESTING PROGRAM FULLY CARRIED OUT

THE ninth annual convention of the Georgia-Florida Pecan Growers Association met at Quincy, Florida, May 26, at 10 a. m., and finished the program at noon the following day. The sessions were held in the beautiful and commodious Gadsden county courthouse. The attendance, while not as large as at some previous meetings, was representative and the formal papers and discussions were practical and able presentations of matters of interest.

One noticeable feature of the convention was the faithful adherence to the published program, and the completeness with which every assignment was fulfilled. One advertised speaker was prevented from attending on account of being in a northern hospital, but an able substitute was on hand to take his place. Another sent his paper which was read by Secretary Bassett and Prof. H. K. Miller, who they say has recently been advanced to the dignity of a bank president, summarized his subject into a verbal message and transmitted it by word of mouth via the secretary.

President Stone presided, and the secretary had the affairs of his office in good workable shape. No time was lost or wasted, but any one with a question or pertinent experience to relate was given due time and attention.

Following the invocation by Rev. J. Marion Stafford, Mayor Gibson, in a few well chosen words, constituted the convention as a Quincy institution for the time being and bestowed privileges and freedom to the visitors with prodigal hand.

W. C. Jones of Cairo, Ga., who was booked for the response to the address of welcome, was on hand and with retrospective vision and prophetic insight framed with bright word pictures a message of the rich heritage now coming to the Southland through the agency of nature's richest horticultural gift, the pecan. He briefly reviewed the conditions of the ante-bellum South, the titanic struggle of the Civil War, the dark days of reconstruction and the discipline of years of poverty, now being followed with a

a fruitage likened to "apples of gold in pictures of silver," with dreams of a future for this land which will permanently make it the greatest beneath the sun. Mr. Jones said that while the nut growers had come to Quincy with bright anticipations of hospitality which were sure to be fully realized, still they came to do Quincy good. Reference was made to the world's markets now at the door of the pecan belt through the opening of the Panama canal, to the fact that the pecan is the finest nut grown and that not one in ten of the hundred millions of people in our own land know anything as yet about the wonderful nut we are now producing. We must let the world as well as our own people know what we have.

President B. W. Stone, in his annual address reviewed the work of the association and mentioned some of the agencies which have contributed to the growth of the industry. This address, as well as other convention papers will appear in subsequent issues of THE NUT-GROWER.

W. P. Bullard of Albany, Ga., presented an interesting paper on Opportunities in Pecan Culture, in which he designated the pecan as "the prince of insurance policies."

Prof. Matz of Gainesville, Fla., read a valuable paper on "Die-back," a pecan trouble often supposed to be rosette. Photographs and specimens of diseased trees and of twigs were shown. The speaker said that cultivation, pruning and care will to a great extent prevent injury from this cause.

President Stone announced the appointment of committees as follows:

On Resolutions: J. C. Wilson, Waycross, Ga.; W. C. Jones, Cairo, Ga.; W. C. Bassett, Monticello, Fla.

On Nominations: R. H. Columbus, Ga.; C. R. Shaw, Quincy, Fla.; J. C. Williams, Cairo, Ga.; H. C. White, Putney, Ga.; J. C. Benson, Monticello, Fla.

On Place of Next Meeting: A. Simpson, Monticello, Fla.; J. B. Wight, Waycross, Ga.; C. A. Rouser, Quincy, Fla.

Thomasville, Ga.; W. P. Bullard, Albany, Ga.; J. H. Trump, Quincy, Fla.

The Question Box was always open and one of the first problems developed was along the line of the best varieties. It seems that Schley holds its leading position and would be the one to plant if the grower was confined to a single variety. Alley and Delmas are favorites, while the Van Deman is being restored to its former popularity. W. C. Jones pointed out that several years' test is needed to properly estimate the value of any variety.

The carefully prepared paper on The Value of Well Balanced Farming in the Pecan Belt, by W. L. MacGowan of Quincy, brought out a general discussion of the subject. H. C. White of Putney, Ga., and Prof. J. W. Firor of the Georgia State College of Agriculture figured prominently here. Among the topics of importance that were discussed were the use of legumes, cover crops and the conservation of moisture.

Advertising as a Factor in Success with the Pecan was the theme on which Jefferson Thomas of Jacksonville made a practical talk. Mr. Thomas is connected with a prominent advertising agency and through his general work as well as his connection with the Florida citrus growers was able to furnish much valuable data which pecan growers can use to advantage.

C. K. McQuarrie, a Florida farm demonstrator, gave an account of co-operative marketing of crops which had come under his observation. He stressed the absolute necessity for honest grading of products. In cultural operations the importance of subsoiling was emphasized.

Prof. Firor spoke on Rosette, Mr. S. M. McMuaran who had been assigned the subject, being prevented from attending on account of sickness. This address was of much interest and when published should be carefully studied.

Bud Moths was the subject treated by C. S. Spooner. The different varieties and preventative measures received attention. Spraying, it was stated, will control this pest.

In H. C. White's paper on Winter Killing, he stated that grafted trees were more liable to injury from this cause than are budded trees, and that his experience showed that the different varieties are about equally affected.

The case-bearer, according to Prof. H. K. Miller's message to the convention, should have attention in August, a mixture two pounds of powdered arsenate of lead in 50 gallons of water being recommended.

J. B. Wight called attention to the services rendered by birds in controlling insects and made a plea for their protection.

Following the session on Wednesday evening, the members of the association were tendered an informal reception at the Elks Club, where they en-

joyed the hospitality of that order and the citizens of the town.

Thursday morning the subject of marketing nuts came up. C. A. Van Duzee reported for the committee on Markets and Marketing and also read a paper on the Pecan Markets of the Future. This was followed by a general discussion of the subject in which the National Pecan Growers Exchange figured. Mr. W. P. Bullard of Albany, Ga., Mr. McQuarrie, Mr. Thomas, as well as several others took part in this discussion. Proper grading, local organization and publicity were emphasized and the consensus of opinion seemed to favor the early operation of such plans as may be adopted for marketing the 1915 crop.

Papers on the subjects of growing first-class trees and superior nuts were presented by B. A. Fohl of Fitzgerald, Ga., W. W. Bassett and B. W. Stone.

The committee on revision of constitution and by-laws appointed at the 1914 convention reported that their draft of constitution and by-laws had been submitted to the association at its semi-annual meeting, that it had been received and adopted and was subsequently printed in leaflet form and distributed. The work of the committee, which consisted of J. B. Wight, J. F. Wilson and H. K. Miller, was ratified and it was discharged.

J. F. Wilson presented the report of the committee on Resolutions, the first paragraph of which was adopted by a rising vote, the others being approved in the ordinary way. (See page 70 for these resolutions.

Thomasville was designated as the place of the next meeting on report of the committee which advised that the new constitution provided that all annual meetings are to be held there unless otherwise directed by the association or the Executive committee.

R. B. Small of Columbus, Ga., chairman of the committee on Nomination read that committee's report in which they recommended that the following be elected:

President, C. A. Simpson, Monticello, Fla.

Vice-President, W. P. Bullard, Albany, Ga.

Secretary-Treasurer, W. W. Bassett, Monticello, Fla.

Directors, H. C. White, Putney, Ga.; J. B. Wight, Cairo, Ga.; H. K. Miller, Monticello, Fla.; B. W. Stone, Thomasville, Ga., the officers and directors constituting the Executive committee.

The report was received and the recommendations adopted.

Mr. Stone, in surrendering the office which he had acceptably filled for the past two years, thanked the association for the honors bestowed upon him and for the co-operation and support he had been accorded.

Mr. Simpson, the newly-elected president, was duly appreciative of the honor of the position. He said while his early training as a public speaker had not yet produced any marked effect, still he was glad to serve the association and the industry to the best of his ability.

The newly elected president announced the appointment of standing committees for the year as follows:

Orchard Statistics: W. W. Bassett, Monticello, Fla.; C. R. Shaw, Quincy, Fla.; H. H. Simmons, Jacksonville, Fla.; H. G. Cannon, Cairo, Ga.; A. C. Snedeker, Waycross, Ga.; L. B. Dukes, Moultrie, Ga.; W. P. Bullard, Albany, Ga.; C. A. Parker, Thomasville, Ga.; L. M. Hansford, Americus, Ga.

Exhibits and Premiums: B. W. Stone, Thomasville, Ga.; W. C. Jones, Cairo, Ga.; H. C. White, Putney, Ga.

Mr. Love, on behalf of Quincy, expressed appreciation of the honor bestowed on the city by holding the convention within its borders. Mr. C. R. Shaw announced from time to time arrangements for the convenience and pleasure of the visitors, and was always available for supplying information of any kind, especially as to where cool drinks were obtainable. Mr. J. H. Trump, manager of the Elk's Club, was conspicuous and untiring in his activities in behalf of the visitors.

When the Quincy boosters captured the 1915 convention by storming the Thomasville meeting a year ago with glowing picture and promises difficult to fulfil, many questioned the expediency of going there for the annual meeting. However, those who braved the inconveniences of reaching the place by rail as well as those who came in automobiles—some of the latter traveling nearly a hundred miles—all agreed that the glowing promises of seeing a most beautiful city, surrounded by productive and highly developed lands on which specialized and intensive agricultural operations were being conducted, were of actual conditions, realizing in a remarkable way Mr. Jones' "apples of gold in pictures of silver," needing only the fruition of thousands of acres of modern pecan orchards to complete the scene.

In the measure of the promised hospitality the realization overflowed the bounds of reasonable anticipation, so that the visitors heartily conceded the inducements held out and the promises made were fully realized.

Quincy was evidently looking for a pearl of great price when she set about securing this convention. The pecan for Gadsden county is something which the people there can possess by paying the price of properly directed effort. Only a few individuals are thus far in the pecan game properly. Co-incidental with this statement it might be observed that the number of copies of *THE NUT-GROWER* circulating in the county is distressingly small. Since the

convention has opened the way for its consideration we feel warranted in suggesting that the regular circulation of one hundred copies of *THE NUT-GROWER* in the county and a generous use of its advertising pages would lead directly to the planting of a thousand acres of modern and first class orchards within a comparatively short time. This may seem to the uninitiated as simply a boost for the official organ of the industry, but the statement can be just as easily demonstrated as were the statements regarding the Quincy territory made at Thomasville last year.

The afternoon of the second day was devoted to sight-seeing. About a score of automobiles were loaded with visitors and citizens and made excursions over selected routes which had previously been marked out with flags at all turning points. The course was about twenty five miles in length and showed beautiful, highly cultivated farms, fine livestock—the cattle largely Jerseys—and tobacco plantations under the highest type of intensive cultivation and with modern appliances for protecting the crop. Farm after farm was passed where acres and acres of the crop are grown under partial shade, obtained by the use of a canopy of slats. Other fields were covered with mosquito netting, as completely as a bed is screened. This was for the double purpose of securing partial shade and for excluding the moth which deposits its eggs on every plant, producing the tobacco worm, which must be hand picked from the plants if they are not screened. The cultivation of these tobacco fields is intensive. Fertilizers for an acre costs, in round numbers one hundred dollars. Dry weather at critical season reduces the yield and sometimes a hail storm will entirely destroy the crop. In curing the tobacco a large barn is needed for every four acres. The most careful, skillful and constant attention is required both day and night or the tobacco will be damaged in curing. Sometimes a good profit is made on the crop, sometimes a heavy loss, while the average annual profits made by those who stay in the game and know the business thoroughly is approximately about what a ten or twelve year old pecan orchard would yield per acre, while the expense each year is presumably about the entire cost of the orchard. This crop is about as much a gamble for the rich farmer as cotton is for the ordinary grower.

Space will not permit the mention of the many interesting sights and incidents of this trip, which covered about thirty-five miles of road and yielded two and a half hours of enjoyment.

As a practical working body, the 1915 convention will rank high in the history of the association. As to the influence it may have on Quincy and Gadsden county, time alone can tell; but indications are that it may be appropriately likened to seed time with the promise of abundant and perpetual harvests.

The Nut-Grower

Published monthly by The Nut-Grower Company

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

ENCLOSURE 3

The importations of Brazil nuts into the United States during 1913 amounted to \$797,000. For 1914 it reached the sum of \$2,280,000. All these came directly from Brazil.

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Satsuma orange trees suffered to some extent in the south east the past winter owing to the early cold and freezing weather which occurred in November while many of the trees were still in active growth.

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An exchange tells of a subscriber who thought of discontinuing his subscription until business improved. However, on more mature consideration he concluded that the reasons for discontinuing were really the reasons why he needed the paper more than in prosperous times.

◇ ◇ ◇

Trade papers like THE NUT-GROWER circulate almost entirely among people directly engaged in the lines of business they represent. It is this feature of direct circulation which makes them desirable advertising mediums for all those engaged in business lines covered by the special publications.

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A contributor to the Utah Farmer advocates the planting of nut trees on Arbor Day. It is urged that the nurserymen who give attention to furnishing nut trees and see that they are properly planted will be building desirable business for the future. The fact that nut trees are more difficult to propagate and transplant than fruit trees has contributed to the scarcity of such stock in the general nurseries.

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Albany, Georgia, will be the convention city for the National Nut Growers' Association the present year. The exact date has not yet been selected but the probabilities are that it will be during the nut

harvest period. Six years ago the convention was held at Albany and a day was spent visiting the large orchards in the Albany district. The plan for 1915 will be to again go over the same route, note the changes, and see the actual demonstration of results which were simply in prospect in 1909.

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It requires courage and some money for the nut nurseryman to continue his advertising during the entire year, especially when he has sold all his stock and has to decline orders. The fact is that proper and regular advertising is a part of the nursery investment, and not a simple expense to be cut out as soon as possible. It is cumulative in results and the temporary discontinuance cuts out this indirect advantage so that a new campaign again starts at the bottom and grows in proportion to its regular use.

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Since pecan orchards have come into public favor, many inquiries are made as to the commercial prospects in connection with other nuts, and in widely separated parts of the world. Some data was assembled regarding coconut cultivation by an agent of the consular service at Singapore. Summarized it shows that the cost of a coconut orchard is something over a hundred dollars per acre, that it begins to bear the sixth year, and that the profits by the ninth year amount to something over fifty dollars per acre.

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During the spring of 1914 an orchard of ten acres was started on cut over land near Waycross, Ga. The trees were planted in dynamited holes before the land was cleared and broken up. The planting was followed by about ten weeks of dry weather, with about two inches of rainfall during this period. This caused a loss of over 50 per cent among the Satsuma oranges which were inter-planted in a small portion of the tract but the loss of pecans was only 5 to 2 per cent. Good trees properly planted mean much in getting an orchard started.

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Intermediate crops for the young as well as the established nut orchard is an important consideration. It is surprising to what extent many nut growers persist in sowing oats among their trees. Any cereal crop when planted for any other purpose than winter pasture is a direct compromise in which both the trees and the crops suffer seriously. The high fertilizing which is claimed justifies the use of oats in the orchard is undoubtedly a fallacious theory as far as the regular growth of the trees is concerned. The modern consensus of opinion is that the excessive drafts an oat crop makes on the soil moisture at the very time the trees need all that the soil ordinarily supplies is the compromising feature of such operations.

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Waycross, Ga.

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Wholesale orders solicited.



WITH THE EDITOR AND HIS CORRESPONDENTS

More Early Bearers

Editor NUT-GROWER:

I have noticed in your late issue an account by Mr. Edwards of the Stuart and Delmas pecans. I have a number of small pecan trees in my yard that I believe are worthy of mention.

I have a three-year-old Stuart that has set 65 clusters of nuts. I believe it is safe to say that they will average 4 1-2 nuts to the cluster, or about 300 nuts to the tree.

I have a small three-year-old San Saba, which has been severely cut back, in order to straighten the tree, that is very heavy set in fruit. I have a small two-year old Halbert that has a number of clusters of nuts.

Last spring I top worked a seedling tree to several varieties. The chip bud method was used, the buds being inserted in March, forced out in April. This year, just twelve months from the time the budding was done, there are a number of shoots that are four or five feet in length, and are heavily loaded with fruit.

I think it is safe to say that most of the improved varieties of pecans will come into bearing just as early, if not earlier, than with apples and pears.

E. J. KYIE,

College Station, Tex.



THE FIG

BY RUSSELL W. BENNETT

[This article is used in The Nut-Grower because the fig offers a promising inter-crop for the pecan orchard, when location and other circumstances are favorable.]

The fig was held in high favor by the nations of antiquity. It was much esteemed by the Roman epicures and at harvest time constituted a large portion of the food

of slaves engaged in agriculture. It was one of the principal articles of sustenance among the Greeks. Large quantities are raised in Southern Europe but the principal exports are from Asia Minor where the drying of figs is an important industry. In the cotton belt section of our own southern states the fresh fig has long been considered a great delicacy and few of the old homesteads are without sufficient trees to supply the household. It is wholesome and healthful and perhaps the most valuable of our domestic fruits. It has pleasant laxative qualities possessed by none other; its value is well recognized in medicine. The tree is long lived; is subject to few insect depredations, bears early, thrives with little or no attention and provides an abundant harvest.

Climatic conditions here have been deemed unfavorable to its drying and the poor shipping qualities of the fresh fruit gave little encouragement to extensive planting but with the introduction and increased demand for the preserved fig, canneries were established and plantings extended. With the improved service provided by the railroads, the growers on the Atlantic seaboard nearest the markets of the eastern cities, commenced to realize large profits from express shipments of the fresh fruit packed in berry carriers.

Data on the fig as a commercial proposition is scarce and very unsatisfactory. There are innumerable instances of extremely large profit from a few trees in all parts of the cotton belt and this induced considerable orchard planting several years ago. Under widely different conditions of soil and cultivation, the orchards were generally successful and bore good crops for three or four years when wholesale

disaster overtook many of them. An unaccountable die back set in which soon resulted in their total loss.

That there were exceptions that continued to return particularly large profit, some of them as old as fourteen years and which are still increasing their yield year by year, induced capitalists to make a very thorough investigation of the subject.

Expert horticulturalists were put in the field from the Rio Grande to Charleston and detailed examinations and reports made of the conditions of both orchard and yard trees to determine the feasibility of extensive commercial plantings. These reports have been carefully analysed and the conditions necessary for successful orchard operations have been definitely determined.

Through the courtesy of one of the foremost horticulturists of the section and interested largely from Florida to Texas, under whom the investigations were pursued, I am permitted to cite the conclusions reached.

Almost identical treatment had been given three of the most successful of the older plantings. One below New Orleans, one in southern Mississippi and the other near Charleston. The trees ranged from 8 to 14 years old and the results were fully equal to that obtained by trees growing around the house and chicken yards in every part of the belt and it was found that as nearly as possible the same conditions were provided as naturally occurred in the yards. Around the houses, chickens roosted in the trees, many of them were close to stable or kitchen door and the roots extended under house and wood shed. A large amount of nitrogen was unconsciously provided. The roots were undisturbed from year to year and most of them had plenty of water from kitchen dish pan; from the wash tubs and waste from well and all thrived and fruited abundantly. Plenty of nitrogen plenty of water, good drainage and

undisturbed roots appeared to be the elements necessary to success.

In these particular orchards no plowing was done during the summer months after the second year. Cow peas were planted in the spring and were allowed to grow until fall when they were harvested or plowed under. This legume is very rich in nitrogen and furnished nearly all the fertility necessary for the trees. The vine provided a mulch keeping the ground cool and moist during the heated term. The Iron or Brabham cow pea is preferred as not being subject to root rot or wilt as are most other varieties when planted repeatedly on the same ground.

The consensus of opinion is that phosphates do not appear to be necessary at all and potash in such small quantities as are usually found in any soil; there is however, room for experiment in connection with potash requirements. It is suggested that potash will not only make a larger sugar content and harden the fruit, improving its shipping and keeping qualities, but may even supply the conditions that will make drying feasible.

It has been deduced from a complete analysis of the observations reported, that in orchard planting, clean cultivation should be given for the first two years, until the trees are well established, but that commencing the second spring after planting, no plowing should be done after the growth starts. The trees will not stand cultivation in the summer after the second year but may be plowed without harm during the winter. Plenty of water is essential but becomes injurious if it stands on the ground or around the roots for any considerable time.

Nitrogen is the only essential fertilizing element and phosphate, as productive of seed formation, is undesirable and the acid form in combination is injurious. Large quantities of nitrogen are required and is best supplied by growing cow peas on the ground. One cutting may be made for hay and the

Pecan Trees

**Do You Want Trees
That will Grow
and Bear
?**

If so, learn about my methods of propagating, handling and shipping before you decide where to buy.

Information about pecan growing given for the asking :: ::

J. B. WIGHT
CAIRO, GA.

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None Better

Pecan Growing Made Easy

By planting trees dug with entire tap root and well developed lateral roots. Few nurseries have such trees.

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By planting only genuine budded or grafted trees, of best quality and best producing varieties. Some of the biggest, thinnest-shelled nuts don't bear ---beware of them

Griffing's Trees are Models Root and Top

Our varieties are best. Gold Medal awarded our pecans at Jamestown Exposition. Handsome pecan catalog free.

**The GRIFFING BROS.
COMPANY**
NURSERYMEN
JACKSONVILLE, FLORIDA

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Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
Box 21. Macclenny, Fla.

SATSUMAS

OUR stock of Satsuma orange trees for this season are trees worthy of the name; not little plants or switches. They are two year tops on four year (transplanted) stocks and have a root system that will make failure impossible.

They must be seen to be appreciated. 20,000 in stock. Catalog free

Jennings Nursery
Jennings, La.

Finest Pecan Trees

Budded or Grafted

Satsuma Orange, Grape Fruit
Miscellaneous and Ornamental
Nursery Stock grown by

Summit Nurseries, Monticello, Fla.

Ask for Catalog

The W. B. Dukes
Pecan Farm
Moultrie, Georgia
Growers and
Shippers of
FANCY PAPER
SHELL PECANS

One million grafts and buds of Schley
Stuart, Delmas and Moneymaker.
Write for favorable prices.

vines then allowed to grow until fall. Pruning has proved most desirable, though not generally practiced, but the largest crops and the best fruit have come from those trees that appeared to most observers very severely pruned.

Some varieties fruit almost immediately after planting. In 30 months, trees given proper attention should yield from four to eight quarts and materially increase their yield each season.

There are many square miles of untilled acres lying in south Georgia and north Florida, with most excellent transportation facilities which provide ideal natural conditions for fig culture on an extended scale. These lands are now being released by the large timber interests and may now be had at low prices when development is assured. Here lies a most unusual opportunity for both the shipment of fresh fruit and in preserving. Transportation is good and fuel plenty.

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Chestnut Disease Quarantine Proposed

The chestnut bark disease has become so serious that in the opinion of the United States Department of Agriculture it is desirable to quarantine New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, Iowa, West Virginia, Ohio, North Carolina and Nebraska, or such portions thereof as may be found to be essential. The proposed quarantine will restrict the movement from this territory of chestnut nursery stock and chestnut lumber with the bark on.

The chestnut bark disease is comparatively recent in this country. Its origin is not absolutely known, but it is believed that it was brought in indirectly from China, where it exists also. In 1908 it was found widely distributed in the Hudson River Valley and in the vicinity of New York City. It is caused by a fungus which rapidly kills the native chestnut trees

and is spread chiefly by the distribution of nursery stock. Once it been established, however, it is spread locally by wind, birds and insects. Migratory birds may also carry the disease for long distances.

Since this disease is proving fatal to the native chestnuts in the infected area, it is quite probable that their place may be taken by chestnut orchards grown for the nuts in areas that have not yet been infected and from which it is hoped that the proposed quarantine will keep out the infection. At the present time the native chestnut grows in practically all of the territory east of the Mississippi except a section of the coastal plain of the Southern States, the northern half of Maine, and parts of Illinois and Michigan. For two years after the tree has been killed by the fungus the timber remains valuable, but deterioration sets in after that time.

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Explosives in Agriculture

Explosives are extensively used in modern agriculture and their use for deep plowing or subsoiling is almost as great a step forward as irrigation, is the statement made by Gilbert Ellis Bailey, Professor of Geology, University of Southern California, in a recent bulletin.

After showing the necessity of loosening the soil to depths greater than those reached by the most efficient tillage machinery, for the purpose of soil aeration and increased water storage capacity, he asserts that blasting the subsoil is the only means of proper deep tillage. Aeration of the subsoil is necessary for oxydizing and nitrifying the elements of plant food.

Soil porosity is necessary to permit rain water to settle by gravity to the water table, and later rise by capillarity as the plants require it.

The importance of a bountiful supply of water and facilities for its free movement through top soil and subsoil is shown by the fact

that a ton of hay during growth pumps up from the soil 500 tons of water.



Combination Offer

By arrangement with the National Nut Growers Association we are able to offer an annual membership and a year's subscription to THE NUT-GROWER for \$2.50. You can save money besides getting the big value this offer presents. Enroll promptly and get ready for a great convention at Albany this fall. Send remittance to J. B. Wight, Secretary, Cairo, Ga., or to THE NUT-GROWER, Waycross, Ga.



Advantages of Advertising

Discussing the advantages of advertising, Frank Stockdale, an economic and business expert of Chicago, in addressing the Ad Club of Atlanta, Ga., said that 84 per cent of the business failures in this country are of those who do not advertise. The accumulative effects of advertising, he declared, do not fall far short of being as solid as government bonds.

Mr. Stockdale declared these to be the golden rules of advertising:

"Inject your firm's personality into your advertising copy.

"Tell nothing but the truth.

"Put goods behind your advertising, and

"Keep everlastingly at it.

"If you don't put truth into your copy," he said, "you put yourself at the mercy of words, and the man who is the biggest liar gets the biggest trade. Nobody, however, wants the reputation of the biggest liar in Atlanta—or anywhere else."



Trees an Inspiration

As trees were the great source of the beauty of paradise, so much of the beauty of our homes is in the trees that surround them, and many fond recollections of the days of our childhood are bound up with trees. You recall the old apple tree under the shade of which you passed many a happy

hour or perchance wept away many a childish grief. It is good to remember trees—they make themselves remembered. There is that about a tree that makes nearer those who have fostered and watched its growth, and met under its spreading branches, and makes dearer the land where it grows.

Whoever plants a tree sets in motion a mighty train of forces whose action we cannot imitate, nor even fully understand, but which we can direct. The growth of a tree presents a striking contrast to the works of man. As we watch its development there is no push and pull, no stress and strain. It represents the silent, persistent, resilient forces of nature, acting through scores or even centuries of years. Yet it can be destroyed in an hour, and when it is gone there is a vacancy not soon nor easily filled.

It is the manifestation of divine life that gives to nature its signal beauty and symbolic character, and he who lives in sympathy with nature leads the ideal life. The tree is rooted in the ground but it grows upward and its branches reach toward the sky. There is that in human nature that roots us to the earth, but the principle of growth is within us, and that growth like that of a tree, should reach toward heaven.—W. R. Lazebny, in Ohio Forester.



Brazil Nut Trees

In this country Brazil nuts are almost as well known as walnuts, yet few know the manner of their growth and the steps taken in their collection and marketing. The tree itself is the most majestic in the valley of the Amazon, where it attains a height ranging from fifty to a hundred feet. Generally several hundred trees are found in a group. The control of the best producing districts long ago passed to private individuals; hence the natives are not free to pick and sell the nuts at will.

The Brazil nut tree does not begin to bear fruit until it attains

60,000 Pounds of... Pecans

Is the estimate of our 1914 crop made by those who know.

Our crop consists of many of the finest of the standard varieties of pecans.

We are offering these choice nuts for sale either in bulk or in small lots. :: :: ::

For price or other information, write to

The
G. M. Bacon
Pecan Co.
DeWitt : Georgia

PECAN TREES

Our Specialty is growing well rooted budded and grafted trees of best varieties.

Careful attention given all orders. Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

Nothing Pays Like Good Printing

THE NUT-GROWER is equipped with the machinery and has the skilled workmen needed for the production of artistic printing of all kinds.

Our Prices are Right

LET US FIGURE
...WITH YOU...

THE NUT-GROWER
WAYCROSS, GA.

the age of fifty years or thereabouts and continues to produce crops intermittently almost forever. At least trees known to be hundreds of years old have produced crops. The pods in which the nuts are contained drop in November and December.

These pods are very hard and weigh several pounds, consequently the trees are studiously avoided during the period in which the pods are dropping since it would be extremely hazardous for the gathers to expose themselves to the danger of having the pods fall on them from such a great height. Each pod is at least seven inches in diameter and is full of nuts. The pod is usually opened with a machete.—Argonaut.

English Walnuts in Pennsylvania

The English walnut is attracting wide interest in Pennsylvania as a commercial orchard tree. Scarcely a week goes by at The Pennsylvania State College without receiving inquiries concerning this nut. These inquiries are usually prompted by the fact that already within the state are bearing trees which have proved both their hardiness and their ability to bear abundant crops of nuts equal or superior to the nuts found in our eastern markets, which are imported from the Old World. California or Oregon, the principal sources of our commercial supply.

Because of the interest manifested, the Department of Horticulture of the College has planned a thorough investigation of the subject. This will begin with a survey of the state to determine the location of all trees. In order to make this survey as complete as possible, the Department urgently requests the assistance of everyone who can give facts concerning such trees, especially as to location, character of nuts, age of trees, hardiness, etc. Owners of nut trees are urgently requested to correspond with the College. It is hoped that this information will be sent

in to the Department without delay so that the trees may be visited by the investigators and fuller notes and observations made.

Chinese Walnut Industry

The Chinese or Manchurian walnut (a type of the *Juglans regia*) is grown in a number of districts in the province of Chihli, Shansi, Honan and Shantung. In Chihli Province the three principal districts are Lanchow and Changli which adjoin each other, and are about 100 miles north and east of Tiensin on the line of the Peking-Mukden railway; also the district of Changpinchow, which lies about 30 miles north of Peking. These three districts produce the best grade of walnut which is exported from Tiensin. In Shansi Province the district of Fenchowfu produces large number—in fact, walnut trees may be found in almost any of the hilly districts in the four provinces mentioned. The greater part of the nuts exported from Tientsin, however, are raised in Chibli Province.

Active Walnut Growing in California

California is extending its acreage in walnuts. The crop for several years has exceeded 20 million pounds annually. In the Puente and Covina section 2,200 acres are just beginning to bear, 800 acres are in young trees, while a large additional acreage is now being planted. When this acreage is in full bearing the Puente Walnut Growers' Association, it is stated, will be obliged to operate the largest walnut packing and cleaning house in the world. Imported walnuts are dutiable at 2 cents per pound not shelled, and 4 cents per pound and shelled. Imports of the unshelled totalled 28 million pounds in the shelled 9 million pounds in the United States during the year 1914. Their total value \$300,000. Although California has attained a large production of walnuts, importations show

THE USE OF NUTS

Compiled by Mrs. T. A. Banning and other ladies under the auspices of the National Nut Growers' Association.

One hundred and sixteen practical recipes for the use of Nuts. Introduction by Mrs. Harriet North

Foreword by Mrs. W. N. Hutt

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Waycross, Ga.

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no diminution.—Commerce Reports.

Walnuts in Arizona

The English walnut has been grown in Arizona for more than twenty years. These trees, however were raised by grafting the French nut on the root of the native black walnut, such as has been done in the California groves. There are a number of these trees at Safford, Graham county, Arizona, which

have been bearing good crops every year. The French nut grafted on the stem of the Arizona black walnut produces in five years a tree that would require ten years to produce by grafting on the root. It makes just twice the progress of the root graft variety. One of these trees will produce nuts the year after it is grafted and will produce nuts in commercial quantities in three years.—Tucson Citizen.

NUTS IN THE DAILY MENU

NUT SALAD.

Mix one cup chopped pecans or walnuts and two cups shredded lettuce. Arrange on lettuce leaves and garnish with mayonnaise dressing.

NUT CAKE.

To plain cake batter add a half cup of finely chopped walnut or pecan meats. Bake in a shallow pan, cover with boiled frosting and ornament with nut halves.

NUT AND PEACH SALAD.

Fill the cavities of halved peeled peaches with a mixture of nut meats, pears and celery, chopped fine. Garnish with lemon jelly and serve with mayonnaise.

CHOCOLATE AND NUT SANDWICHES.

Take two tablespoons of sweetened chocolate, mix with a little water and beat to a thick paste; chop fine a half pint of nut meats; stir the chocolate paste while cooling, add the nuts and spread thinly on narrow wafers. Let harden, then press two wafers together.

MACARONI CROQUETTES

Chop fine cold, cooked macaroni. Make a thick sauce by rubbing together two tablespoons of flour with one tablespoon of butter and adding one cup of cold milk. Stir over fire until thick and smooth, and add one teaspoon salt and a dash of pepper. When the sauce is cold add to it one cup chopped

nuts and one cup of the cooked and chopped macaroni. Add onion juice if desired. Proceed as with other croquettes and serve with nut or tomato sauce.

NUT KISSES

Two cups of brown sugar, one-half cup water, one teaspoonful of vinegar, one teaspoonful vanilla extract and one cupful nut meats. Boil the sugar, water and vinegar together until the mixture threads when dropped from a spoon on waxed paper.

NUT AND CELERY SALAD

Mix equal parts of English walnuts or pecan meats cut in pieces, and celery cut in small pieces. Marinate with French dressing. Serve with border of shredded lettuce.

EGG SALAD

Cut six hard-boiled eggs in halves, crosswise, keeping the whites in pairs. Remove yolks and mash. Add mayonnaise dressing and finely chopped nut meats. Make into balls; fill whites. Arrange on lettuce leaves with nut meats and dressing.

NUT BREAD

One-half cup sugar, four cups flour, one level teaspoonful salt, four teaspoonfuls baking powder, two eggs, two cups milk, one cup chopped nut meats. Mix dry ingredients. Add the eggs well beat-

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We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

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The National Nut Growers' Association, W. N. Hutt, President, Raleigh, N. C.; J. B. Wight, Secretary, Cairo, Ga.

Georgia-Florida Pecan Growers' Association, W. W. Bassett, Secretary, Monticello, Fla.

Northern Nut Growers' Association, W. C. Deming, Secretary, Georgetown, Conn.

The Pecan Growers' League, J. F. Wilson, General Manager, Wavcross, Ga.

Albany District Pecan Exchange, Wm. P. Bullard, President, Albany, Ga.

Southeastern Pecan Nurserymen's Association, Wm. P. Bullard, Secretary, Albany, Ga.

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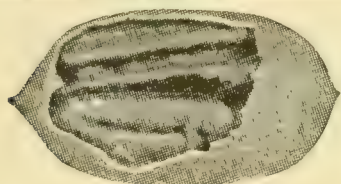
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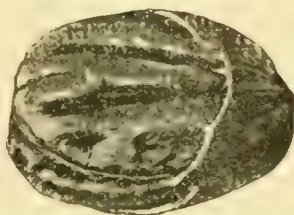
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Pecan Trees Satsuma Oranges

and

Grape Fruit Trees

That are Right

SAMUEL KIDDER

Monticello, Florida

en: two cups of milk. Put in tins and let stand twenty minutes. Bake three quarters of an hour.



Nut Cakes

Four tablespoonfuls butter, one egg and cracker crumbs, six table spoonfuls cream, six slices bread. Trim all crusts off the bread; spread the bread with nut meats mixed with salad dressing, cut into three oblong pieces; beat the egg and add the cream. Dip the bread into the egg and cream, then into cracker crumbs. Place in an oiled pan and bake in a hot oven until brown.



NUT BREAD

Two and one half cups flour, two and one-half teaspoonfuls baking powder, one teaspoonful salt, one-third cup sugar, two-thirds cup milk, one egg, well beaten, one cup chopped nut meats. Sift flour and baking powder; add salt, sugar and nut meats. Beat egg well; turn in milk and add to above. Put in pan and allow to stand ten minutes. Bake in moderate oven.



NUT BREAD

One-half cup molasses, one-half cup sugar, one and one-half cup milk, two cups graham flour, two cups white flour, one teaspoonful salt, four teaspoonfuls baking powder, one cup walnuts, one well beaten egg, two tablespoonfuls corn starch. Mix flour, baking powder, salt and nuts; add milk, molasses and sugar, then egg. Let stand in pans about thirty minutes before baking.

Stuart Pecans

I still have several hundred pounds of medium sized Stuart nuts for sale in bulk or small lots. Let me know how many you want and I will quote price.

J. B. SEANOR

Fitzgerald, Ga.

North-East Texas Plantings

Much interest is being developed in North-east Texas in the planting of paper shell budded pecans, in a section where the wild seedling has been abundant in the Red River for years. G. W. Paisley, formerly editor of a daily news paper at Lincoln, Illinois, who came to Bowie County, Texas, two years ago to develop a large tract of land near New Boston, planted ten acres to pecans the past winter. Dr. J. N. McGee, who has just completed a large lake for a pleasure resort, fed by natural springs, planted five acres during the past season, while Dr. J. M. Winder planted an orchard of five hundred trees. These orchards will be enlarged next season and several others will be planted. Many native trees in the bottoms will also be top worked.

◇ ◇ ◇

The cold wave which visited the Gulf Coast on March 21 damaged the strawberry crop seriously. Points farther north where vegetation was still delayed escaped with but slight loss.

◇ ◇ ◇

Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia

Fine Texas Pecan Orchard

5 special shares for sale in

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Get Our Special Prices

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farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.



Books and Catalogs

Stark Brothers Wholesale Catalog, including the Story of an Apple. Louisiana, Mo.

Citrus Culture; second edition, eight pages. By Theo. Bechtel, Ocean Springs, Miss.

Pecan Literature; a four page leaflet listing books and pamphlets, offered by The Nut Grower Co., Waycross, Ga., mailed on request.

Hooper Brothers and Thomas Company, West Chester, Pa., catalog for 1915; 80 illustrated pages listing trees and ornamental shrubbery.

How Love and Limestone Made Life Worth Living; by Joseph E. Wing. Reprinted from the Breeders Gazette. For distribution by the Live Oak Limestone Company, Jacksonville, Fla.

Charter and By Laws of the National Pecan Growers' Exchange; a 16 page booklet giving the full text of the charter and the by-laws of this recently organized marketing organization. Copies can be had on application to W. P. Bulard, Secretary, Albany, Ga.

Pile's Annual Catalog and Growers' Guide for Pure Bred Poultry; 48 page folder by Henry Pile, Freeport, Ill., giving descriptions of leading breeds of fowls and prices on birds and eggs. Contains much information which orchardists can use to advantage.

Vertical Farming; by Prof. Gilbert Ellis Bailey; a 72 page pamphlet in which the author argues that blasting the subsoil is but a logical extension of the theory of cultivation. This pamphlet is for free distribution by the Du Pont Powder Co., Wilmington, Del.

P ECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition.

One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

THE NUT-GROWER COMPANY
WAYCROSS, GA.

The Nut-Grower

Volume XIV

July 1915

Number 7



Men are Four:

He who knows not, and knows not he knows not. He is a fool—shun him.

He who knows not, and knows he knows not. He is simple—teach him.

He who knows, and knows not he knows. He is asleep—wake him.

He who knows, and knows he knows. He is wise—follow him.

ARABIC PROVERB.

10c per Copy

\$1.00 per Year

THE NUT GROWER SOCIETIES

Georgia State Horticultural Society

The third summer meeting of the Georgia State Horticultural Society will be held in Clarkesville, Ga., on the 18th and 19th of August. The program committee met recently in Atlanta and have gotten together a most excellent program for this meeting, and it is hoped that there will be a very large attendance. Every member of the Georgia State Horticultural Society should constitute himself a committee of one to see that somebody comes with him to the mountain regions for this meeting.



Texas State Horticultural Society

The annual meeting of the Texas Horticultural Society will be held at College Station, August 2, 3 and 4. Following is a program of the meeting:

AUGUST 2ND, 2 P. M.

Invocation.

Welcome address—E. J. Kyle, Dean of the School of Agriculture, College Station.

Response—M. Falkner, Waco.

Annual address—J. H. Arbenz, President, Sarita.

Report of Secretary-Treasurer—G. H. Blackmon, Dallas.

Address—Dr. W. B. Bizzell, President A. & M. College, College Station.

Organization—Clarence Ousley, Director Extension Service, College Station.

How Texas is Handling the Citrus Canker—Ed. L. Ayres, Chief, Division of Nursery Inspection, Houston.

Appointing special committees.

AUGUST 3RD, 8 A. M.

Business.

Reports of Special Committees.

Reports of Standing Committees.

Managing an Apple Orchard—J. M. Higginbotham, Dublin.

(Continued on page 93.)

President Pecan--

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Pecan Growing Made Easy

By planting trees dug with entire tap root and well developed lateral roots. Few nurseries have such trees.

Made Profitable

By planting only genuine budded or grafted trees of best quality and best producing varieties. Some of the biggest, thinnest shelled nuts don't bear—how many of them

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Mammoth White Cosmos. We have saved a very fine lot of seed from one of the choicest large-flowered strains of this plant and offer it at 15c per oz., \$1.50 per lb. If you can use several pounds will make special quotations.

Choice Mixed Mammoth Cosmos. This is of same high quality as above and contains many shades of color. Same price as white.

Calabash or Pipe Gourd. We have grown a fine lot of this seed and offer it at 10c per oz., 80c per lb.

Ricinus or Castor Bean. We have saved a fine lot of seed of many strains in both green and bronze foliage and from 5 to 15 feet in height. 1-4 lb., 15c, 1 lb., 50c.

L. H. Read & Co., Deer Park, Ala.

Quality Trees

Pecans Satsumas

General line of Hardy Citrus Trees

Every shipment means a satisfied customer

Your patronage will prove it

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THE NUT-GROWER

VOLUME XIV


WAYCROSS, GA., JULY 1915

NUMBER 7

ADVERTISING AS A FACTOR IN THE SUCCESS OF THE PECAN INDUSTRY

By JEFFERSON THOMAS

A Paper read at the Quincy meeting of the Georgia-Florida Pecan Growers' Association

HE pecan growers of the United States are confronted with exactly the same problems which would face a manufacturer of a new line of goods who went ahead and built an enormous plant, employed a large number of skilled workmen and proceeded to make up a large supply of his goods without having taken any steps to develop demand for them or having made any arrangements for the supply of this demand.

It is unnecessary to say that before very long a manufacturer who had taken this course would find himself in financial difficulties. It is equally needless to say to intelligent men like those who make up this organization that, unless the pecan industry of the country is placed upon a sound footing as regards its selling end, in the very early future thousands of orchard owners will find their investment an unsatisfactory one, to say the least.

Up to this time, there has been sufficient demand for really good pecans at reasonable prices to fairly well satisfy the comparatively limited number of growers whose groves are in full bearing. The time is rapidly coming when the increased production will seriously disturb existing conditions, however, I believe that those of you who have looked into the matter will agree with me that upon the solution of the marketing problems now depends the future prosperity of the pecan industry.

Ninety per cent of the people of the United States have no real knowledge of pecans. I do not mean to say that only one person in ten knows what a pecan is, but I am convinced that nine out of every ten persons are altogether lacking in information as to the difference between the kind of pecans that you gentlemen are growing and the kind that they have been accustomed to buy at the corner grocery. My investigations show me that at least three-fourths of the people of this country never ate a really good pecan and that they have only an indirect and not

always correct idea of the nut in its improved and modern form. Accordingly the general knowledge of pecans is ineffective as relates to any desire to use them.

The story of the pecan must be fully and properly told to the American public before the owners of groves now in bearing or to come into bearing in the next few years can have any assurance that their investments will be permanently profitable ones. If this story is not told in an effective manner, our pecan groves will be just about as valuable property as the plant of the Postum Cereal Company would have been had Mr. Post built it and undertaken its operation without taking the people into his confidence as to the product and its usefulness. It is a time for plain speaking and I feel that it is impossible to place too much emphasis upon the crisis which very shortly will confront pecan growers everywhere.

Most of you know of the success that has attended the efforts of the citrus fruit growers of California who are associated in the California Fruit Growers Exchange in making known the name and fame of "Sunkist" oranges. Even more successful, though on a smaller scale, has been the educational campaign of the Florida Citrus Exchange in behalf of the superior oranges and grapefruit that are grown in our fair state. There have been other examples of successful effort along similar lines in the marketing of fruits and farm products. The work of the Georgia Fruit Exchange, formed to handle the problems of the peach growers of that state, is familiar to most of you.

There is some question in my mind as to whether the same plan of cooperative organization can be applied to the pecan industry, however. The perishable nature of citrus fruits, in itself is one of the factors which renders their marketing difficult and uncertain, makes a virtue of necessity in a way which I believe is the foundation of the success of

the co-operative movements in this field. The less perishable nature of pecans, it seems to me, introduces a complication which may prove a serious handicap in an endeavor to get pecan growers together in a co-operative body.

In other words, the fact that orange and grapefruit growers have gotten together in a co-operative way with even a fair degree of efficiency has been very largely due to the perishable nature of their products. When these are ripe and ready for market, they must be disposed of or prove a complete loss. It was the existence of this condition which gave the commission men their great hold on the citrus industry. It is the prevalence of a more intelligent conception of the meaning of the condition that has made possible the present organization in the field of citrus merchandising. With a product that can be held for some time, with proper handling, as is the case with pecans, this element of the situation becomes radically changed.

At any rate, an organization of the pecan growers would have to be financed to advance money to its growers if not, indeed, to buy their crops outright, it seems to me. Indeed, it would seem that the time is rapidly approaching when it will be necessary to the continued existence of the citrus growers' organizations for them to do something of the kind. The problem of financing a co-operative movement to the extent that it can operate on these lines admittedly presents many complications of a puzzling nature. Not the least of these is the difficulty of getting efficient management in any organization that is formed on co-operative lines when the handling of vast sums of money is necessary. The theory is a beautiful one, but in practice it often discloses weakness at essential points.

I am sometimes inclined to believe that the solution of the problem may take the form of a great business enterprise, possessing many of the elements of strength of the United Fruit Company but so controlled by proper legislation as to be restrained from practices that would be unfair to growers. Such a corporation, if properly planned, financed and managed, might buy the great bulk of the pecans grown in this section of the country at prices which would yield the growers a fair profit. It could then proceed to grade and pack the nuts in centrally located warehouses, arranged for such storage as would be necessary to prevent glutting of the markets. The kind of enterprise which I have in mind would need to be financed to carry on an educational campaign adequate to the needs of the situation and of course would have its salaried representatives in every important market in the country to see that as demand for good pecans was developed the trade was used for the supply of this demand.

The mention of the trade in the preceding sentence was intentional. I do not believe that the

distribution of any food product in large volume ever can be arranged for in a practicable way that will eliminate the retail dealer. Some of our friends are of the opinion that mail order business in pecans as well as in citrus fruits, may be looked to offering a solution of the selling problem. I have been intimately associated with mail order merchandising for a quarter of a century and fully recognize its usefulness in many fields. It does not have the fundamental elements that make it susceptible of application to food products in their natural state on any large scale, however. The only reasons why people buy by mail are that they may secure goods at the lowest possible prices or that they may pay above the average figures for them. In the very nature of things, nuts and fruits cannot be sold by mail at as low a price as through the trade, owing to the higher costs of distribution and transportation on small lots to isolated buyers. The appeal of mail transactions must be confined to the class of people who want to pay more than their neighbors in order to get a specially fine grade of goods, therefore, and it is self-evident that this class of people always will be a limited portion of the total population.

It is perfectly clear to me that there must be before very long adequate and aggressive effort in the marketing end of the pecan industry. I am not fully convinced as to whether the right kind of educational work can best be undertaken by a co-operative organization or a privately owned corporation. Doubtless some of you do have well formulated ideas on the subject and it is my purpose in this brief paper to bring out discussion of this important point. With an adequately financed and properly organized propaganda for the pecan industry, backed by scientific selling methods, the future of the industry can be made everything that any reasonable man has ever expected. Without such educational work and such selling effort, I greatly fear for the coming years of its history. Now is the time to get busy in the making of plans, not after the industry has gone on the rocks. I am not as familiar as I would like to be with the progress made by your organization along these lines, so I trust to learn something by coming to this meeting, however little I may have been able to prove helpful to the body. I do know that but for the financial disturbances growing out of the foreign wars something would have been done ere this along purely commercial lines to adequately provide for the marketing needs of this industry.

You will notice that while I was announced to talk on "Advertising as a Factor in the Success of the Pecan Industry," I have not up to this time used the word "advertising." This omission has been intentional, advertising in a modern sense is but a part of scientific merchandising. Without the right kind of selling organization, advertising cannot be of real

efficiency. With proper organization of the selling end, advertising may be made a vital factor in any business. It seems to me unwise at this time to discuss in detail advertising plans and policies for the reason that so far as I know there is as yet no organization of pecan growers nor any private corporation engaged in the marketing of pecans operating upon a sufficiently liberal scale to assure the success of an adequate and proper advertising campaign for the education of the people in relation to pecans and their usefulness. No plan for selling pecans will be a success that does not include provision for intelli-

gent and liberal advertising. On the other hand, to attempt the advertising of the pecan without the right plan for distribution and selling will be to invite failure. My concluding word is to recommend for your careful consideration the famous adage attributed to one of our early Southern public men, "Be sure you're right; then go ahead." You can count on whatever knowledge and resources that are at my command in any efforts you may make, and I can assure you that the advertising fraternity will gladly extend any help in its power to make your endeavors productive of the deserved result.



THE PECAN OUTLOOK

By B. W. STONE

Address of President at the Quincy meeting of the Georgia-Florida Pecan Growers' Association

WE now assemble the 9th annual session of the Georgia-Florida Pecan Growers Association, and with pride we note the great progress this Association has made. Nine years ago a handful of people met in Thomasville, and feeling the need of a social as well as a business relation, suggested the organization of this present body. Since that time it has had its ups and downs, but has been supported by ardent pecan men, and we are to-day ready to say, "Well done, faithful fellows." To-day's success of the Association is the result of their labors. We meet here to discuss the live subjects of to-day.

Geographically, we are in the southeast corner of the United States, but from the paper shell pecan standpoint, Georgia and Florida furnish four-fifths of the total acreage planted to improved pecans. As you see, the busy men of these territories are assembling here to-day to discuss the paramount subjects. This is really nothing more than a busy man's conference.

We do not cover the world in subjects, but we do cover the subjects with all the available information in the world. That is what makes our meetings so very interesting.

To state briefly the object of the Association, I would say it is for a gathering of men of like minds and like interests to learn to correct evils and errors and to make progress in pecan growing as rapidly as possible. By our assembling together and exchanging ideas and giving our fellow growers the benefit of our practical experiences, we are enabled to accomplish in three years what it otherwise would require over ten years to do.

We have all been a committee to learn how to grow pecans until we are now producing the goods, but most probably we will learn more in the next few years than we have learned in the whole of the past.

It is gratifying to this Association to note that the United States still imports over \$12,000.00 worth of nuts annually and produces at home only about 1-4 of what she uses. It is still more gratifying to note that the American people are learning the uses of nuts and demand them faster than the pecan growers are producing them.

We note that the United States promises to produce the largest crop of pecans this year that it has ever grown, but with co-operation and systematic handling, the crop will be sold to advantage.

A few years ago 2000 cars of Georgia peaches glutted the markets of the country. There are now handled 6000 to 7000 cars at a profit. May I add that it is gratifying to note that the severe ravages of the case bearer and the bud moth in many orchards serve as a net to catch and to keep out of the pecan orchards all of the timid fellows?

For the benefit of the members of this Association, it would not be out of order to review what has been done by our general government. It has furnished bulletins and leaflets giving to the public valuable information on the pecan industry. There is not one here who has not relied upon the government's report many times for advice on soils, climates, and especially varieties of nuts. It would be hard, indeed, to estimate the value the government has been to us in giving dignity, stability and authenticity to the business. When we consider the different sections that are interested in this business and the different people that are personally interested in the affairs of pecan growing, and the confusion produced by varieties, we can readily appreciate the efficient and systematic work rendered us by the government.

We have further been fortunate in having one designated as a specialist to study pecan culture all

(Continued on page 90.)

The Nut-Grower

Published monthly by The Nut-Grower Company

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Advertisements

Advertisements of responsible parties and firms solicited. Money orders not accepted. Rates furnished on application.

Prices of advertising matter preceding date of publication.

4-7-22 3

Thrift

Care and wisdom in the management of one's resources is given as the definition of thrift. When these traits of character are combined and regularly practiced, it matters not how much or how little capital one may possess in order to merit the designation of thrifty or to actually become prosperous. With many whose resources are limited and others whose knowledge of financial operations is limited it may seem impracticable to meet these prescribed conditions. Since the Hawkeye-St. Paul Company is in reality a service corporation, it becomes a matter of confidence that its operations are carefully handled and that the wisdom which comes from practical experience guides and directs the work in the interest of all the stockholders. Being satisfied on these points, it then becomes a wise step as well as a thrifty one to secure an interest in this company.

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What One Pecan Tree Has Done

While at the Quincy meeting of the Georgia-Florida Pecan Growers Association we were shown a tree which produced 965 pounds of pecans in 1914. This tree stands on a city lot owned by C. R. Shaw, where W. L. MacGowan resides. It bears a fairly good nut, and while we do not know how much rent is paid for the handsome cottage on the property, Mr. MacGowan acknowledges that the proceeds from this tree were sufficient to take care of it.

The nut from which this tree was grown was planted in 1880. The spot was where a woodpile was formerly located and was near a horse lot as well. The tree now has a diameter of about 30 inches, an estimated height of 75 feet and a spread of branches of fully 80 feet.

The Pecan Outlook

(Continued from page 89.)

over the United States, and this one, Mr. C. A. Reed, has from time to time traveled the United States and visited every place where pecans demanded attention, and has conscientiously rendered a report that inspires every one with confidence.

I would like to impress upon the minds of all present the benefit that can be obtained from the government and use this department in every way possible. Let everyone ask for a soil survey of his own county and learn as early as possible the best adapted soils for pecans.

As to what the government could do for us, I suggest that above all things, we need something like a 15 or 20 year experiment on the subject of fertilizing pecans so that we, as aggressive, practical, and scientific growers can be guided in dealing to the pecan a balanced ration of fertilizer just as every experiment station of the many states has so carefully compiled bulletins on the balanced ration for live stock. We also urge a continuation of their present work of giving scientific information to the business with their authentic reports. We also need a thorough study of the varieties and work of cross-pollination.

As to the future work of this Association, I would not care to interfere with the different members who are on the program, but would like to call your attention to the fact that while this is the most up-to-date and progressive body of pecan men that can be assembled in the United States, there is no one here who knows the possibilities of one acre of paper shell pecans. We do not know the best combination of all crops with pecans. I have just gathered 15 tons of alfalfa hay off of 13 acres of a pecan grove which is just beginning to bear, but do not know that alfalfa should be grown in a pecan grove.

The industry demands attention from alert and scientific growers, and offers in return bountiful compensation as a reward.

◇ ◇ ◇

Fertilizers or fertilizing materials, that is chemicals containing potash, phosphoric acid and nitrogen, are applied either broadcast to be harrowed or plowed under or as top-dressing or in the hill or with the drill. Each method has its preference in certain cases. Broadcasting of fertilizers is best where extensive culture is practiced and large quantities of fertilizers are used. Applying in the row with the drill has been found more effective in case only moderate quantities of fertilizers are given. Top-dressing is practiced usually only in case of fertilizers containing nitrogen, such as nitrate of soda, because these nitrogen materials quickly wash in the soil through the rains. Applying in the hill is the least effective in yields although striking in forcing early growth.

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WITH THE EDITOR AND HIS CORRESPONDENTS

Fruit The First Year

Editor NUT GROWER:

I have quite a number of trees
that were budded on two year
roots in April that have as high as
five little pecans per tree. These
buds, you see, have only been put
in 60 days. Do you hear of many
trees that bear the first year bud-
ded? Will appreciate a reply.

I have about 75,000 little pecan
trees growing, so you see I am a
pecan believer and cannot get
along without your paper.

R. W. FAIR

Arp, Texas.

[When buds are taken from
bearing trees it is no unusual thing
for the buds to bear a few nuts
the first year.—Editor.]



From Mr. Forkert

Editor NUT GROWER:

This rather late to say anything
of occurrences of last spring, but I
have been in no mood for writing,
having been in bad health for
some time.

The blooming period with the
pecan this spring was the shortest
in duration I have ever experienc-
ed; about three weeks and all was
over. This is the first season since
1903 that I have done no cross-
breeding. Falling from a ladder
at the beginning of the blooming
period, I was unable to mount a
ladder for some time, and in the
meantime the blooming period was
over.

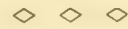
After waiting five years for pistil-
late bloom on a McAllister pecan
tree, which after waiting this
length of time presented itself this
season, I was unable to get it into
the tree at the right time to do
any hybridizing. This was one of
the sorriest disappointments.

The prospects for a good crop of

pecans are bright, barring acci-
dents.

C. FORKERT,

Ocean Springs, Miss.



Albany, 1909-1915

The coming of the National Nut
Growers Convention to Albany,
Ga., late in October this year af-
fords a great opportunity for im-
pressing the business world with
the importance of the pecan in
general as well as for demonstrat-
ing the commanding position held
by the Albany District in this
modern and crowning horticultur-
al era. It was in Albany fourteen
years ago that the initial move
was made which culminated in the
formation of this national body.

Six years ago, in 1909, after an-
nual and remarkably successful
conventions had been held in sev-
en different states, a wonderful
gathering was held in Albany and
a special train used in carrying
the visitors who came from fifteen
different states, from orchard to or-
chard and which proved to be one
of the greatest demonstrations of
horticultural science ever attempt-
ed in this country.

That convention and the tour
through thousands of acres of pe-
can orchards which had magically
sprung into existence since that
initial Albany meeting only eight
years before, may well be regarded
as a propitious seed time, while
the coming convention may fit-
tingly anticipated as the harvest.
Again a tour will be made through
the now bearing orchards, at a
time when the golden harvest of
brown beauties is in active opera-
tion, when the various processes of
gathering, drying, grading and
loading the rich product in solid
car loads can be witnessed. This
year, however, a hundred or more

automobile will take the place of the railroad train and the vehicles of every description used in 1909. An entire day will be given to the excursion over a sixty mile course, with frequent stops for refreshments and inspection. The greater part of this tour will be along the driveways of thousands of acres of solid pecan orchards and through scenes of surpassing interest and beauty which at present have no counterpart in the world.



Grading Pecans

At the Quincy convention several timely and able talks, which

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SWEET LOVER SEED. Greatest, quickest, cheapest fertilizing crop for orchards, groves, cotton plantations, truck lands, hay or pasture on sandy, swampy lands. Booklet, sample, **HASKELL & HASKELL**, Garden City, Kas.

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FOR SALE. Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. **C. W. RANSOM**, Houston, Tex.

FOR SALE. Back numbers of **THE NUT-GROWER**. Parties desiring to complete their files should send list of what they need. **The Nut-Grower Company**, Waveross, Ga.

For Sale

Two hundred and eighty acres—40 acres 20 year old pecans, balance good land at \$12.50. Terms. Very cheap—a splendid bargain.

Smith & Morgan, Dothan, Ala.

For Sale

A paper shell pecan orchard of 15 1/2 acres. Best grades varieties, coming into bearing; in the famous Louisiana alluvial section; half mile from depot. Price right. Reasonable terms. Write

Box 218, Siloam Springs, Ark.

Rood Pecan Groves

Pecan Trees and Nuts
for sale.

C. M. Rood, Pres. Albany, Ga.

were supplemental to the published program, were heard. One of them was by H. C. White of Putney, Ga., on the subject of grading pecans. Many interesting features of this topic were discussed and illustrated by jars of graded nuts. The grading was done with the machine designed by the Department of Agriculture in conjunction with several growers. The different sizes of nuts are separated by wire mesh gauged to a sixteenth of an inch difference in the diameter of the nuts. The name of the variety needs to be used in connection with the sizes in order to give a correct understanding of results. Mr. White has promised a synopsis of his talk for publication.



The severe frost in western New York on May 27 was very destructive to the fruit interests in that state. It is claimed that the only fruit that escaped is the English walnut.



The Pecan Sales Company has been incorporated at Albany, Ga., by David Brown, J. A. Davis, Ben Adler and J. H. Brown.



The Almond Outlook

Almonds have begun attracting attention in California, both for buyers and sellers, and some little buying from growers in the country is being done and offers being made to the trade by California dealers. The California Almond Growers Exchange will not name prices, according to present plans, until early August. There seems no question but what prices on almonds in California will be lower this year than last, as last year they were entirely too high and the nuts did not move out promptly. Just what the prices will be this year is yet problematical, and while some of the packers have put out quotations in the neighborhood of 15 1/2c for Nonpareils, there is a variation in prices between quoters and all quotations

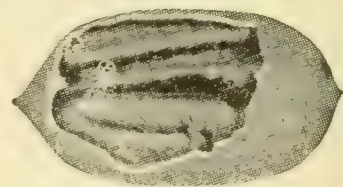
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That will Grow
and Bear
?**

If so, learn about my methods of propagating, handling and shipping before you decide where to buy.

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CAIRO, GA.



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Stuart Pecans

I still have several hundred pounds of medium sized Stuart nuts for sale in bulk or small lots. Let me know how many you want and I will quote price.

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One million grafts and buds of Schley
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Write for favorable prices.

seem more or less in the nature of trying out the situation.

The question of the price of foreign almonds to be made in the United States this season depends very largely on shipping facilities, and should transportation be available it is thought that there will be a good volume of imports.

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Texas State Horticultural Society

Continued from page 86.

Commercial Truck Growing—A. R. Sprague, San Benito.

The Nurseryman as a Factor in the Betterment of Rural Conditions—J. R. Mayhew, Waxahachie.

AUGUST 3RD, 2 P. M.

Packing, Handling and Marketing—B. A. Baldwin, Houston.

Address—Dr. Bradford Knapp, Department of Agriculture, Washington, D. C.

Why I Quit Banking for Pecan Growing—A. C. Easley, Waco.

Bulb Growing in the Rio Grande Valley—Eltwood Pomeroy, Donna.

Election of Officers.

Adjournment.

◇ ◇ ◇

Budding the Pecan on Hickory in East Texas

BY ARTHUR L. NORMAN

My experience in this somewhat new field dates back to 1908, at which time I secured pecan buds of the named varieties from Prof. W. S. Hotchkiss, Director of the East Texas Experiment Station, also some encouragement.

The varieties used were Frotscher, Sweetmeat and San Saba, with about the same results with all, some of them died but several lived.

The methods used were ring, chip and ordinary patch buds. I now use most exclusively what Judge Chas. L. Edwards terms a "modified patch bud." Much of my success I attribute to his teachings both oral and written, for which, credit due, is hereby given.

In this immediate section the pecan is not a natural growth,

though it is. East, South, West and North, at a distance of less than a hundred miles in either direction, however it does well wherever planted or worked on hickory either, the latter method I much prefer as it makes a congenial stock and comes into bearing much earlier.

Dr. Collins of Jacksonville who has a grove of 40 acres, most all on pecan stock, says that he greatly prefers hickory to pecan as a stock for pecan. He has a hickory budded with one Stuart bud in 1908, in 1912 it bore a crop of 5 pounds of choice Stuart nuts. Pretty large returns on a small investment wasn't it? And in only four years at that.

There is nothing like the interest taken in pecan culture here, that it, in my humble opinion deserves. I think with the thousands of acres of both upland and bottom hickory awaiting the man with a little money, and a vision that sees a little further than tomorrow, that the day will soon come when this sadly neglected industry will take the place it is entitled to.

Top-working is no longer a dream or any untried theory, as the bearing trees of myself and others abundantly prove.

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The Quincy Convention

The Quincy convention furnished more copy for The Nut Grower than space in June issue would accommodate. This supplemental convention story is simply a continuation of the previous article.

Judge White, a prominent and esteemed citizen of Quincy was a regular attendant at nearly all the sessions and took a lively interest in the proceedings. In view of his ninety five years of youthful activities he was elected an honorary member of the Association. Messrs White, Shaw and Small were appointed to notify him of his election.

On the request of the meeting, H. C. White gave a demonstration

of results obtained from the use of a machine for grading pecans. He has promised to write for our columns a synopsis of his work in this particular.

Last month we told only part of the story of tobacco which was given us by an experienced and extensive operator as we passed farm after farm where it is grown with all the skill and enterprise that ample capital can command. We made a rapid mental calculation as to what the same capital, skill and energy would accomplish when properly applied to pecans. Approximately the cost of making a tobacco crop on ten acres would, if properly handled, plant and bring into bearing an equal area in choice pecans. This would in ten years mean an even hundred acres of orchard with an average valuation of five hundred dollars per acre, or \$50,000 worth of property, paying annually as good a dividend as the occasional tobacco crops yield. From this stage of orchard development the profits increase and continue indefinitely, while every year the planting of the tobacco with its certain cost and problematical profit has to be repeated.

However we were on the outlook for pecans and the objective point on the western leg of our route was the home of Mr. H. B. Hough, where a promising young orchard has been started and several hundred acres of suitable land is available for its enlargement. Mr. Hough is a genial gentleman in the prime of life, a turpentine operator, greatly in love with his beautiful home and his fruit and pecan orchards and farm operations. While he has been on the place four years it gives evidence of natural or acquired horticultural skill in the planting of shrubbery and flowers on the home grounds and care they receive. The hospitality of his interesting family was lavished upon the callers and we regretted the necessity for a hurried departure.

Returning to Quincy the north

leg of the tour was begun. Here we found elegant roads, kept in fine condition. It was a pleasing surprise to learn that Mr. J. H. Sylvester our seat companion who had so entertainingly described the tobacco interests was a member of the county board of commissioners and that the road along which we were spinning at a rate somewhat over thirty miles an hour was under his particular care. Through the courtesy of his brother, Mr. Robert Sylvester, who piloted our party, we took a spin of six miles outside of the prescribed route and saw a small pecan orchard in which the trees were uniformly beautiful. This orchard home is owned by parties who live in one of the Georgia pecan centers. It was said to be but three years old, which, if correct, indicates that it takes other Florida points five years to do as well as this place can do in three years.

Mr. Trump, of the local committee of arrangements, did not relinquish his job of doing things for the visitors until everyone was landed at the railway station most available for a quick trip to his destination. One group was taken a distance of twelve miles by automobile to make an advantageous connection. Another party which included the writer and his fellow townsman, Dan Lott, were given a delightful moonlight ride of twenty four miles in order to reach a desired train.

But again our story encroaches on the allotted space, and several odds and ends must be omitted or woven into other columns.



Opportunities in Pecan Culture

BY WM. P. BULLARD.

Read at the Quincy Convention.

WHEN the committee met to prepare a program for this meeting my friend, Mr. J. B. Wight, proposed the subject, "Advantages and Disadvantages in Pecan Culture." Upon my motion this subject was assigned to Mr.

80,000 Pounds of... Pecans

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Nut Growers' Organizations

The National Nut Growers' Association, W. N. Hutt, President, Raleigh, N. C.; J. B. Wight, Secretary, Cairo, Ga.

Georgia-Florida Pecan Growers' Association, W. W. Bassett, Secretary, Monticello, Fla.

Northern Nut Growers' Association, W. C. Deming, Secretary, Georgetown, Conn.

The Pecan Growers' League, J. F. Wilson, General Manager, Waycross, Ga.

Albany District Pecan Exchange, Wm. P. Bullard, President, Albany, Ga.

Southeastern Pecan Nurserymen's Association, Wm. P. Bullard, Secretary, Albany, Ga.

The National Pecan Exchange, Chas. A. Van Duzee, President, Cairo, Ga.

Wight but he secured a saving clause to the effect that he might get a substitute. Immediately after the committee meeting he wrote asking me to take the subject, explaining that a possible engagement might prevent his early attendance at the meeting. I agreed to take the assignment off his hands but asked the privilege of changing the title to the present one for the reason that, while they both mean practically the same thing yet "Opportunities in Pecan Culture" seemed to appeal to me more than the other title.

I once heard a sermon in which the minister commented on the reluctance of some of his parishoners to undertake certain of the church's activities, probably because of diffidence in taking hold. And then he told the story of the young lady who fell sprawling on the icy sidewalk and while she lay helpless her rather bashful escort cried out, "O! Miss Blank; how I should like to help you out if I only knew where to take hold." And so I was willing to help Mr. Wight out if I could get a change of title that appealed a little more to my mentality and afforded a little better "take hold." And what's in a name anyway; one writer will treat a subject in one way and another writer in an entirely different way.

Generally and broadly speaking there is no good thing that comes to mankind excepting through effort intelligently, industriously and continuously applied. Occasionally one among the crowd here and there gets a "windfall," but these are exceptions which are proverbially said to prove the rule. Pecan development is certainly not one of these exceptions referred to, at least not to the man behind the development. But it might indeed be a veritable "windfall" to the

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Foreword by Mrs. W. N. Hutt

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THE NUT-GROWER
Waycross, Ga.

Announcement

The 1915 convention of the National Nut Growers Association will be held at Albany, Georgia, the fourth week of October. It is proposed to make this gathering a top-notch in the annals of the industry.

In connection with the local committee of arrangements THE NUT-GROWER will feature the convention in various attractive ways in the August, September and October numbers, while the three following issues will be devoted largely to the reporting of the convention and as far as practicable there will be printed in its columns the leading and most important convention papers. These feature issues are designed with a view to giving such wide and favorable publicity to the convention and to the pecan in general that a largely increased attendance at the convention can confidently be expected. Additional pages will be included in these numbers,, while the number of additional copies distributed will be as large as the advertising patronage will permit.

Notwithstanding the special value of these numbers for advertising we will make no additional charge for space when as many as three successive numbers are used. Where a single insertion is desired in the Convention Number (October) the rate will be 50 per cent in addition to our regular charges.

Owing to the favorable conditions which the coming convention and the official organ of the association will combine, together with the wide distribution of extra copies in the publicity campaign directed by the local committee, we need only to suggest that the measure of patronage for these special numbers will determine largely the extent of the publicity operations planned for making the convention the greatest in attendance and interest yet held, which is the aim of the officers of the association, in common with the growers of the Albany section of the pecan territory.

Kindly give this opportunity for you to profit by the plans here outlined—which at the same time gives merited support to the industry, the association and THE NUT-GROWER—careful consideration and advise us promptly as to amount of space and number of issues you will use.

THE NUT-GROWER COMPANY
WAYCROSS, GA.

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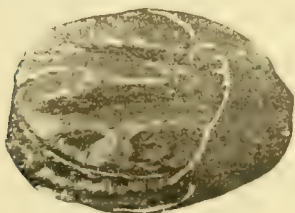
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heir at law. A bearing pecan orchard has been frequently referred to as the prince of insurance policies. Nothing can excel it:

"A heritage it seems to me

A king might wish to hold in fee."

But to the man behind that orchard from its inception to maturity it has no resemblance whatever to a sinecure. To him there are times that are reminiscent of the "rocky road to Dublin"—times when the halo and glamour of the thing is swallowed up in the fatigue of discouragement that now and then always attends efficient effort. For him there are the seven or eight years of watchful toil before financial returns of any consequence come in. And for him there is the expense attending the best pecan development; and the disease and insect enemies (not many in comparison with other good lines of horticulture) that he perchance may have to meet and overcome; and the problems of varietal adaptation to this or that locality; and the between-the-row farming problems with its just correlation to both immediate cash returns and the ultimate orchard good; and the great problems of grading and standardizing and marketing which are now beginning to be worked out by the newly organized National Pecan Growers' Exchange—all these and perhaps more are the lot of the planter and true developer that might well give pause to the indolent, the irresolute and the impatient. But O! what a final consummation to the resolute, the industrious, the MASTER.

But every line of human endeavor has its problems—the miner at his shaft; the artisan at his bench; the clerk at his counter; the manufacturer in his shop; the merchant at his desk; the banker in his counting house—all these have to be overcome. And all these things that have to be overcome may be classed as disadvantages in every line of work, and not more so in pecans than in others—in fact fewer in pecans than in any other good thing I know.


It is authoritatively estimated that over 90 per cent of business men fail, and that not over 10 per cent of the successful make notable successes; but given the necessary factors of right location, right trees as to both variety and quality; right care and attention; and ample capital for unstinted development; and last but by no means least—the right man behind the development, then I do not see why there should be a failure in the pecan business. But there will be some failures in more or less degree because there will be men who will get into it who are not master workmen, who could not be efficient in anything. This is inevitable in every kind of industry. But given all the said necessary factors then the trees will grow and they will bear bountiful crops of the most delicious nuts on earth and they will do this years upon years; and there are millions upon millions of probable buyers in the world who have never yet even heard of our large sized thin shelled nuts.

The nuts will go to the market in probably two grades or sizes and the remainder through the crackeries as shelled kernels. In this connection it might be of interest to state that recently one corporation manufacturing food products placed one order for shelled pecan meats amounting to 220,000 pounds; and this special line of marketing has probably only just begun to be developed. The oil content of pecans is high, and this suggests another future profitable industry.

When our domestic markets are supplied then we will build up large foreign trade. Instead of having our product swamped by outside importations we will export and supply those same foreigners who ship in here and swamp the product of our brothers in other lines. Think it over. And then the inefficient pecan grower may not come up to expectations as to huge production. And many localities less favored by natural se-

Hawkeye St. Paul Company

THIS COMPANY HAS AN ATTRACTIVE
PECAN PROPOSITION

 HIS is simply a safe and sound business movement for utilizing the opportunities for profitable and permanent investment. The plan eliminates the risks, expense and worry of individual ownership of orchards. It is available either for the large or small investor.

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Ocean Springs Pecan Nursery

Season 1914-15

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

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Ocean Springs, Miss.

Established by G. M. Bacon in 1889. Incorporated 1903.
The Oldest Exclusive Pecan Nursery.

The G. M. Bacon Pecan Company

DeWitt, Georgia

Standard Varieties of Properly Grown Trees



Our many years of practical experience combined with the scientific study we have made of the industry enables us to supply to the best advantage the wants of our patrons.

Prompt attention to inquiries.

Send for Price List.



The G. M. Bacon Pecan Co.
DeWitt, Georgia

lection may not come up to their expectation. Over production? No; that is a bogey man. Do not let it disturb you.

One of the most significant things to me in the pecan industry is the confidence of the older men in the business. Charles M. Barnwell who three years ago sold his large pecan orchard near Albany for \$200,000, is now making the beginning of another 300 or 400 acre orchard there. Although well along in years he could not withstand the lure of the pecan tree.

I saw the 150 acre orchard of Mr. C. R. Shaw here (Quincy) this morning. Some of it is bearing. It is not for sale. Mr. Shaw is large tobacco grower and is a trader on considerable scale; everything else he owns can be bought excepting this pecan orchard and when it comes to that he is a "tight wad" He said this morning, "This is the way I figure it. This pecan orchard will grow into large value. I think a lot of it. I have four children and I know of nothing I can better keep for them. No man's money can buy that orchard."



Issues List of Farms for Sale in South Georgia

"Own a Level Farm." is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

P ECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Care of the Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c. 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition.

One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

THE NUT-GROWER COMPANY
WAYCROSS, GA.

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Aug 7-1915

The Nut-Grower

Volume XIV

August 1915

Number 8



BE true if you would be believed. Let a man but speak forth with genuine earnestness the thought, the emotion, the actual condition of his own heart; and other men, so strongly are we all knit together by the tie of sympathy, must and will give heed to him.

—CARLYLE.

10c per Copy

\$1.00 per Year

THE NUT GROWER SOCIETIES

The National Nut Growers Convention

The fourteenth annual convention of the National Nut Growers Association will be held at Albany Ga., October 27, 28, 29, 1915.

With the wonderful expansion and widely increasing interest in nut growing, these annual meetings are coming more and more to be important factors in its development. From all over the pecan belt there annually gather those who are best versed in the questions pertaining to successful nut production. They come to give information to others, and to learn from others the latest teachings of the orchard and the laboratory.

Albany is of all places the ideal one for a nut growers meeting, there being more pecan trees planted within a given radius about Albany than with any other equal area in the world. Opportunity will be afforded to see thousands of acres of these groves, and learn the condition under which success is being achieved.

The people of Albany are already looking forward with great interest to the coming of the nut growers, and they are planning to make their stay a pleasant as well as a profitable one. One day of the convention will be given to an automobile excursion to the various pecan plantations in the Albany, Putney, DeWitt and Baconton sections. At noon of this day the visiting nut growers are to be the guests at a barbecue luncheon complimentary to the Association by the Albany-Georgia Pecan Co., and the South Georgia Pecan Co., of Putney. At Putney opportunity will be given to see a practical demonstration of the cleaning, grading and drying of pecans.

A most interesting and profitable program is already assured. Many questions vital to the industry will be fully discussed. No one who is directly or prospectively

(Continued on page 114.)

President Pecan--

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By planting trees dug with entire tap root and well developed lateral roots. Few nurseries have such trees.

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Our varieties are best. Gold Medal awarded our pecans at Jamestown, Louisiana. Hand some pecan catalog free.

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Pecans, Satsumas, Grape Fruit

We have them in QUANTITY as well as QUALITY. Our stock is especially strong in large grades. Let us figure on your wants. Orders for one tree or one car load given the same careful personal attention.

Simpson Nursery Co.

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Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well rooted. We have also best budding wood.

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THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., AUGUST 1915

NUMBER 8

THE PECAN MARKET OF THE FUTURE

BY CHAS. A. VAN DUZEE

A Paper read at the Quincy meeting of the Georgia-Florida Pecan Growers' Association

WHAT will the market of the future be for our pecans? This is probably the most vital question that we have to consider, and its solution, in a satisfactory way, depends entirely upon ourselves.

If we permit ourselves to enter into relations with the consuming public, upon any basis other than that of an intelligent, aggressive and honorable effort to give value received, and to so conduct our business that our dealings may be along lines satisfactory to all, our efforts will fail, in just that degree that we fall short of meeting these obligations.

There is no royal road to wealth, no short cut to prosperity, and no method of evasion of our responsibilities. Our success will rest upon the accomplishment of a service which shall afford consumers as well as producers, attractive and satisfactory results.

We are now considering how best to meet the exacting conditions of this problem, and the acceptance of a charter from the state of Georgia, at Albany, on the fifteenth day of April, and the selection of a board of directors, for the management of the National Pecan Growers Exchange, has placed at the disposal of the pecan growers, an instrument which can be made capable of accomplishing much for the good of our industry, if it is properly handled, and which can as easily work that industry a very material injury, if its efforts are mis-directed.

The measure of success which may be accomplished by this selling exchange, will rest upon the support given by the producers, and upon the wisdom and efficiency of its officers. No amount of support can accomplish the best results without efficiency upon the part of the management of the exchange, and no amount of efficiency upon their part can avail in the absence of a hearty, loyal and sustained support upon the part of the growers.

There will be misunderstandings, short-comings and disappointments, and it will require the most heroic forbearance, the exhibition of a large measure of patience, and the fullest co-operation upon the part of the growers, if this instrument shall be made to best serve its purpose.

At the beginning, the exchange has had its teeth drawn and its hands tied, so far as wisdom could

dictate, by being formed upon a non-profit basis. Its energy and efficiency can only be directed to serve all of its members, and can not be utilized for the benefit of any favored few. What good is accomplished through its existence must be for the industry as a whole, and its failure must, with equal truth, fall upon all nut growers.

I do not consider this the proper place to discuss the details of the plan for conducting the affairs of the exchange, but many of the problems that will confront the first executive board are the same that will influence the future market of the pecan, and they are the most important problems that confront the grower at this time.

In the first place, we must classify our product, in its relationship to other commodities, as this factor will determine, in a general way, the methods to be pursued in marketing it.

I am of the opinion that the large tonnage which will be produced within a few years, will place this nut in the class with general food products, and that this thought should receive careful consideration in our plans for building our organization.

All food commodities eventually find their level in the markets of the world. In the beginning their value is based upon an artificial standard, which is governed by its sale, to a selected class of people at a fancy price, regardless of its actual value, but as production increases, this method proves inadequate, and the law of supply and demand begins to have its influence.

When the supply approaches the point where it is impossible to obtain fictitious prices, the final basis of market values, is governed by the actual value of the product as a food. The limited demand for the finest nuts for special purposes will continue, but the great bulk of our product will not come under that head, and we must prepare today, to accept its proper classification, and build the machinery for marketing it along proper lines.

The great factors of distribution and transportation, are well established, and it would seem unwise for us to attempt to revolutionize them. If we accept that, it then leaves us only the problem of

bringing our operations into harmony with these institutions.

It is a generally accepted fact, that much of the difficulty of establishing a new product in the channels of trade, comes from a lack of standardization as to grades, quality and packing.

In our fields, we find our efforts, from the beginning, will be hampered by the large list of varieties that have been planted in commercial orchards, the difference in size of nuts from the same tree, and also the difference in size of standard varieties grown in different localities, and the influence of the seasons and the fertility of the root pasture in different years, upon the quality of the nuts.

If we are to maintain satisfactory relations with the agents who must distribute our product, it is necessary that we overcome this seemingly difficult situation, for a standard of quality and size must be adopted, and our methods of packing and labeling must conform to some definite plan which may be agreed upon.

The next large problem which must be considered, is the manner in which the nut crops from the smaller orchards shall be placed upon the market. Any plan which does not provide for careful grading as to size and quality, will interfere seriously with our success.

When a definite system of grading has been adopted, and a standard package agreed upon, it becomes necessary that a rigid inspection be maintained, in which the producer shall have no voice, and a brand be provided, under which such packages may be marketed.

A package sold under the brand of the exchange will be accepted, if it fills the specifications, and will be paid for, but if it falls short of these specifications, it will not be paid for until the exchange has adjusted the basis of settlement. In addition to this there may enter an element of distrust, a lack of confidence and a feeling of dissatisfaction, which may prejudice the people of the market against our product, and thus militate against the success of our efforts. Such a feeling is now prevalent, and has arisen from numerous attempts upon the part of some of the growers to put something over on these people.

These people would welcome the opportunity to deal with a responsible organization, and until such an organization can be established, and demonstrate its efficiency, we shall see the people of the market meeting our advances with a large amount of indifference.

One of the most serious obstacles in the way of establishing our relations with the market, lies in the expense of placing such an organization upon an efficient working basis. Once that point has been reached, the revenue from the volume of business transacted, will be amply sufficient.

In the business world, the term SERVICE has come to represent a very important factor. The perfection of a service giving organization, requires the combining of wisely directed energy, with sustained effort, and the elements of such a combination costs money, especially during the formative period.

For the immediate moment, we may cover the expense of building a selling organization by paying our bills with patriotism, self sacrifice and enthusiasm, but the cold atmosphere of the business world will quickly destroy the efficiency of a machine builded upon such a foundation, or carried forward by such energy.

Eventually, the growers of pecan nuts must market their nuts under a system, and by means of a machine, that is built of the same material, and upon the same lines, as those which have proven successful in the marketing of coal, iron, tobacco or gasoline, and until we succeed in building an organization, along these lines, that will endure the acid test of the business world, in its operations, we will suffer the just penalty attached to inefficiency.

Perhaps some of you may be wondering where this discussion is leading to, and so, I will here give you the answer to the whole question, in a very few words. The future market for pecans, will be just what we, as producers, make it.

Let us reason together, just a little further, upon the methods we must use, in working out our problem.

If you wished to teach a child how to ride horse back, you would first select a safe, reliable horse, and you would then help the child to mount upon its back. A little later you would equip the horse with a saddle and bridle, and you would give the child the opportunity to become a proficient rider, by giving him daily practice in the actual work. No amount of theorizing, or of explanation can avail, unless we give the child the horse and the opportunity.

If we accept the truth, that a selling exchange is the logical way to accomplish our salvation, it then becomes our plain duty to place that exchange in the saddle, and to patiently assist it to become proficient.

Laying aside all consideration of the merits of the present situation in Europe, we may state, that in the successful building of markets and marketing systems, the hats of the world are off to the German nation, and a brief discussion of their methods may serve to help us with our problems.

No pains have been spared by these people, in their efforts to build markets for their products. They have patiently gone out into the distant places, have paved the way to success by a careful study of conditions, needs and desires among their prospective customers, and have spent money, time and effort freely, to lay a broad and deep foundation, to the end, that they might bring their products to the

markets of the world, in an acceptable form and a satisfactory way. We must do our work along similar lines.

The consuming public must be interested in our product, and must be brought to know its merit. We must advertise.

The brokers and jobbers must be brought to know, not only our product, but to recognize our responsibility and our reliability, and we must meet their wishes as to the manner in which we grade and pack our goods.

It is largely up to us to create the demand, for these people of the market are busy handling other nuts, and other products that have become in demand, and they will not devote any large amount of time or thought to our business.

We must devise and adopt a trade nomenclature and must have brands which guarantee our packages, and must stand squarely behind every statement we make, and live promptly up to every obligation.

Upon the other hand, we are confronted by many problems in the producing end of our business. We must devise and perfect grading machinery to meet our needs, must organize local warehouses or sub-exchanges to handle the nut crops at the logical centers of production, and must train men to grade, pack and ship the nuts to the markets. We must provide a system of inspection, methods for curing the nuts before shipments, and a system of accounting. We must agree upon and determine what nuts shall be marketed as table nuts and what shall be sent to the cracker, or otherwise disposed of.

There is work ahead, and our pathway traverses a difficult and broken country, and there are pitfalls and dangers to be avoided and overcome.

Is there a man among you who feels that this problem will solve itself without effort, or that we can avoid years of low prices and unsatisfactory conditions unless we go out to meet these things and conquer them? I think not, and I will leave the subject with a repetition of the answer given before, that the future market of the pecan, is to be what we, as growers, make it.



THE NATIONAL PECAN GROWERS EXCHANGE

BY WM. P. BULLARD.



AM directed to give to the pecan growers of the United States an outline to date (July 27, 1915) of the work of the National Pecan Growers Exchange, sometimes referred to as the selling organization of the pecan industry.

The question of the first importance appeared to our Board of Directors to be that of grading and thus standardizing our pecan nuts. It is well known that there are size variations in nuts of the same variety, not only in different localities but in the

same locality, and, in fact, on the same tree. And there are more or less variations from year to year, depending upon moisture supply, care of trees, etc. Our product has come to be of sufficient commercial importance to require separation into different size grades, just as other products are classified. When a cotton buyer wants cotton of middling or good middling grade he is able to get just what he wants and pays accordingly. So the buyer of pecans should be able to call for a No. 1 or No. 2 grade of any variety and have the assurance that he is going to get just what he wants and not have to be content with the "tree run" as is now so often the case. Ere long the grower with ungraded nuts will find it difficult to sell them at top prices in the general market.

The question of grades being basic, as we thought, it was given first attention. At the first meeting of the Board of Directors immediately following the organization meeting of the Exchange, this question was taken up and placed in the hands of a committee composed of some of the most experienced men in the business, with Herbert C. White as chairman. A prominent member of this committee was Mr. C. A. Reed of the Bureau of Plant Industry of the United States Department of Agriculture. Mr. Reed has spent some years in the study of pecan nuts and in the course of this work has each year experimentally graded many of the leading varieties and from different sections of the pecan belt; and he has done this work on probably a broader scale than any grower in his individual capacity has been able to do. With such valuable data before them, in addition to similar data of the individual grower members of the committee, it was possible to arrive at what appeared to be the proper size or grade classification of several varieties. This committee made its report at a special called meeting of the Board of Directors, held in Albany on the 27th inst., (July 1915), and after careful deliberations the following grades were established:

	No. 1	No. 2
Alley,	13-16 and over.	11-16 and 12-16.
Curtis,	11-16 and over.	9-16 and 10-16.
Delmas,	13-16 and over.	11-16 and 12-16.
Frotscher,	13-16 and over.	11-16 and 12-16.
Moneymkr	13-16 and over.	11-16 and 12-16.
Pabst,	12-16 and over.	10-16 and 11-16.
Schley,	12-16 and over.	10-16 and 11-16.
Stuart,	13-16 and over.	11-16 and 12-16.
VanDeman	12-16 and over.	10-16 and 11-16.

In explanation of the foregoing figures will say that no Alley nut, for instance, can go into No. 1 grade if it is small enough to pass through a mesh opening that is smaller than 13-16 of an inch; therefore an Alley nut that will go through an opening 12-16 of an inch must go in grade No. 2. And an Alley nut small enough to pass through an opening

(Continued on page 108.)

The Nut-Grower

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

Vol. 1, No. 3

OUR CONVENTION NUMBERS

Each year when the National Nut Growers convention assembles, THE NUT-GROWER, for several preceeding as well as succeeding issues, features the prospects and the program, reports proceedings and gives space for many of the important papers. So we have instead of a special convention number a series of numbers of special importance. During the past fourteen years wonderful advancement has been made in the industry we represent, and the trade interests not only increased in volume but are reaching out into allied lines. Thus our advertising space in these convention numbers has a value to the trade even beyond the splendid results due to the regular use of our columns.

It is gratifying to see how the wideawake trade advertisers take advantage of the facilities we afford them. It is this spirit of patronage and co-operation that builds the industry, which in time builds trade for those who let the convention interest know what they have to offer, and THE NUT-GROWER is certainly the best and most convenient medium for securing this desirable publicity.

Last year, in spite of the depressing business conditions caused by the European war, we had a splendid patronage for our special convention number. This year our offer of service is still more attractive, as we make no additional charge for space when as many as three insertions are ordered. Our circular letter, which also appeared in the July number, is bringing favorable replies, but time passes so rapidly that many will fail to get their copy in in time for obtaining the best results unless we regularly remind them that the September, October and November issues are the most opportune numbers.

We urge that every one having special offers to

make should "get there" through the columns of THE NUT-GROWER.

◇ ◇ ◇

In certain sections of the pecan belt, considerable attention is being given to live stock in connection with orchard movements. "Pigs and Pecans" have already figured in South Georgia, the combination working to advantage when properly operated. It was several years after THE NUT-GROWER suggested this combination before its adoption became general. "Kudzu and Cows" is a new suggestion which is being put into operation in several places. The reputation of any one who condemns new moves is not safe. Because cows cannot be tolerated in a young grove, it does not follow but that this difficulty can be overcome, by such simple means as a silo and soiling such leguminous crops as may be most available. And kudzu is putting up a strong claim to a leading place as a storage crop. The editor has a four acre patch of this plant started, and the way it is growing—well, we will wait until the season is over before we estimate how many cows we will need per acre to utilize the production. Our farmer on the Ellwood Orchard where the plants were set the past spring is from Missouri but he has already acknowledged the growing proclivities of the plant.

◇ ◇ ◇

A Kansas firm whose advertisement is found in this number has been investigating southeastern territory to find a locality suitable for growing sweet clover. After several years' trial ideal conditions were found between Waycross and Jacksonville on sandy land shallow to water. Sweet clover is a wild plant and will not stand coddling. It is only necessary to sow the seed and let it alone. It makes fine hay or pasture and in this climate grows all winter.

◇ ◇ ◇

Some time ago a correspondent in Texas inquired for particulars regarding a Georgia pecan orchard of twenty acres on which the owner secured a loan of \$1,500 per acre. He wanted a copy of THE NUT-GROWER containing a report of the transaction which was said to have been negotiated by a New York life insurance company. This makes quite an interesting story, but we must disclaim any knowledge of its having appeared in this journal.

◇ ◇ ◇

As will be noticed in another column, the directors of the National Pecan Growers Exchange have tentatively established two grades for nine varieties. These grades merely refer to sizes, so that the work as far as the grading machines is concerned can be handled with the next crop. Other elements in the grading, such as quality, cracking characteristics, number of nuts to the pound, etc., will be worked out later. Culls in all cases are excluded.

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Join the Association

Editor NUT-GROWER:

The 1915 Badge Book, which is the only available directory of those who are most interested in nut growing in the South, will be from the press the early part of October. This is very much in demand on account of the list of members of the National Nut Growers Association and other information which it contains.

Scores of new members come into the Association each autumn about the time our annual Conven-

tion is held. It will be an advantage to these parties to send in their names at once, so that they may be printed in the Badge Book. As you are making the special offer of a year's subscription to the NUT-GROWER (\$1.00) and membership in the National Nut Growers Association (\$2.00) for \$2.50, I respectfully urge that now is a good time to send membership dues and so be included in the printed list of members in the Badge Book.

J. B. WIGHT, Secretary,
Cairo, Ga.

Indications at present are that the 1915 crop of pecans will fall below that of last season. Continued rains in many localities at the time of blooming probably account for this. In the Albany district the prospects are for a yield approximate to that of last year. Some varieties are dropping the nuts more largely than others, so that observations and records in this particular are of practical importance.



In this issue will be found a letter from J. B. Wight, secretary of the National Nut Growers Association regarding the Badge Book for the coming convention. Prompt attention to the enrollment of new members is important if the names are to appear in the 1915 issue. Our subscribers who are not yet members are reminded that they can send in their applications with renewal of of subscriptions at the combination rate.



In our July number an item headed "Thrift" and intended for another publication gotten out in THE NUT-GROWER shop inadvertently was included in our July editorials and put us in the position

of endorsing the proposition of an orchard development company, a proceeding which is contrary to our policy, no matter how meritorious the company may be.

KEYSTONE Pecan Orchard Co.



Producers and Exporters of fine
PAPER SHELL PECANS



OFFICES:

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Groves: Baconton, Ga.



VARIETIES:

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Samples and prices on request.
Wholesale orders solicited.

Pecan Trees

Do You Want Trees
That will Grow
and Bear
?

If so, learn about my methods of propagating, handling and shipping before you decide where to buy.

Information about pecan growing given for the asking :: ::

J. B. WIGHT
CAIRO, GA.

The National Pecan Growers Exchange

(Continued from page 105.)

10/16 of an inch can not go into even No. 2 grade. There have been but two grades, Nos. 1 and 2, established for any variety.

It may be that later on, after this year's experience, for instance, it may be deemed wise and expedient to make some alterations in these grade dimensions; but for the present these seemed wise and expedient. And later on (this year, we hope) there will doubtless be added other qualifications to these grades: some standard of quality and the minimum and maximum number of nuts of each variety to constitute a pound. While the above named varieties, only, were considered yet it is intended that other named varieties will be included from time to time so as to accomodate growers in quantity of other varieties of standard quality in various sections of the United States.

These grades having been established by your National Exchange the next thing will be the designing and adoption of suitable grading machines. This parent Exchange will have sub-exchanges in each center of production which will have their own grading machinery; and while it might be too much to say at this time that each sub-exchange must use the same make of graders, yet it must be conceded without question that the graders of the sub-exchanges must perforce be of such standard mechanism and efficiency as to insure that all nuts will be graded with that exactness for which this parent organization must uncompromisingly stand at all times. This National Exchange must insist upon, and its policy be squarely and unretreatingly based upon, a high and absolutely uniform standard, not only in grading but in all its dealing with both the grower and buyer public. It can not endure, it can not live, if based and conducted otherwise. Not only the grower but the buyer must

THE NUT GROWER

have complete confidence in this Exchange and its operations.

It might be thought by the impatient that this organization is going too slowly; that we should be ready this fall to take care of all the offerings. But a careful perusal of the foregoing will show that we have problems many that are both delicate and important. Better, far better that we delay a period too long and be sure that we are both ready any right than to blunder along and have both to retract and retrace, which would lose us not only time but that confidence of the grower and buyer public that is so necessary to our continued and useful existence.

In this connection I want to say that this Exchange is desirous of securing reliable data from every pecan growing section of the United States. We would like this data to include location, varieties, age of trees and extent of planting. This information will be useful somewhat in forecasting our work and if mailed to the Secretary, at Albany, Ga., in brief and concise form will be duly appreciated by this association.



Fifty Dollars for a Nut

Suppose old man Baldwin had not told anybody about that first Baldwin apple tree? There would have been no Baldwin apples for the rest of us. Fortunately Mr. Baldwin knew an opportunity for fun, money and public spirit when he saw it, so he grafted other trees from the original one and gave cions to his friends. Thus we are now enriched by having many millions of Baldwin apple trees, all descended from the first and only original one.

The time has now come when we need to find dozens and scores of other Mr. Baldwins who will tell us about the good wild nut trees of America. We now know how to graft them, so that the finding of them amounts to something. We have most surprising resources in the shape of rare nut trees.

Ship your Pecans
in...

Corrugated Boxes



We can furnish them in any quantity at the following prices:



3 lb. size \$2.10 per 100
5 lb. size 2.75 per 100
10 lb. size 3.40 per 100
20 lb. size 4.80 per 100



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and Information



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In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

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F. T. Ramsey & Son
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Pecan Trees

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Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

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OUR stock of Satsuma orange trees for this season are trees worthy of the name; not little plants or switches. They are two year tops on four year (transplanted) stocks and have a root system that will make failure impossible.

They must be seen to be appreciated. 20,000 in stock. Catalog free

Jennings Nursery
Jennings, La.

Finest Pecan Trees

Budded or Grafted

Satsuma Orange, Grape Fruit
Miscellaneous and Ornamental Nursery Stock grown by
Summit Nurseries, Monticello, Fla.
Ask for Catalog

The W. B. Dukes
Pecan Farm
Moultrie, Georgia
Growers and
Shippers of
**FANCY PAPER
SHELL PECANS**

One million grafts and buds of Schley Stuart, Delmas and Moneymaker. Write for favorable prices.

As an example of these unknown resources the recent discovery in Indiana of three or four of the finest pecan trees in the world may be cited. It took looking to find these trees among the thousands of wild ones, but it is true that somebody, some boy, some hunter, some observant farmer, has his eye on nearly all of the extra fine nut trees in his neighborhood. He should tell the world about them, that's all. The way is easy—simply send samples of the nuts, with an account of the tree, to the secretary of the Northern Nut Growers Association, Dr. W. C. Deming, Georgetown, Conn.

This association is made up of people who love nut trees and are interested in them. They hold their annual meeting this year at Rochester, N. Y., September 1 and 2, and expect to see and learn about a lot of remarkable English walnut trees. This association wants your help so badly that it is offering money for it—\$50 for a hazel tree of American origin that can compete with the imported filberts; \$10 for a northern pecan better than we have now, and \$20 for other nuts that are found by judges to be sufficiently valuable.

Now send along your fine hickory nuts, shagbarks, black walnuts, pecans and hazel nuts. You would also be helping along this constructive work as well as yourself if you should join the association.



Pecan Tree Borer a Crafty Worker

What is commonly known among pecan growers as winter killing is probably not caused by frost. Julius Matz of the University of Florida Experiment Station is of the opinion that the mortality in pecan trees is due to some of the various diseases which attack them. Borers are very prevalent in pecan trees and to the casual observer they give no sign of their presence. They make a minute hole, girdle the sapwood of the tree and—the frost gets credit for the work.

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Waycross, Ga.

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One hundred and sixteen practical recipes for the use of Nuts. Introduction by Mrs. Harriet North

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50,000 Pounds of... Pecans

Is the estimate of our 1915 crop made by those who know.

Our crop consists of finest of the standard varieties of pecans.

We are offering these choice nuts for sale either in bulk or in small lots. ::' :: ::

For price or other information, write to

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PECAN TREES

Our Specialty is growing well rooted budded and grafted trees of best varieties.

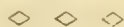
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Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

The most effective way of fighting the borer is to smear the trunk of the trees with a mixture of one gallon of whale-oil soap, one pint of crude carbonic acid or kerosene and eight gallons of water. The mixture can best be put on with a whitewash brush or it can be sprayed on, but spraying is not so effective and is rather wasteful. Apply about once a month.

The adult lays the eggs on the bark. The mixture not only repels the female but it stops up the holes where the young larvae have entered and thus shuts off the air supply. There is also a chance that some of the gases from the kerosene or some of the liquid itself will reach the larvae and kill them. Carbolinum is usually used instead of the kerosene but it probably cannot be had now.—University of Florida Bulletin.



Items of Interest

The 1914 pecan crop at Baconton, Ga., totaled 80,000 pounds.

A number of nut orchardists are growing the China bean as an inter-crop. One grower estimates his crop to be worth \$25 per acre.

"Para-Dichlorobenzene" is the name of a new insecticide described in Bulletin No. 167 of the United States Department of Agriculture.

The California Walnut Growers Association, in its trade circular for 1915 estimates that the present crop will be as large as last year's, when 12,500 tons left the state. The setting of nuts this year is said to have been the heaviest known, but during May and June the loss from blight was heavy in some districts, reducing the state crop about 22 per cent.

In a recent issue of the Montgomery Advertiser appeared a live and attractive human interest story by Mrs. Thomas A. Banning, entitled From Pines to Pecans. It recounts her operations in building a home and business in the South and merits wide reading.

Horticulture

A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

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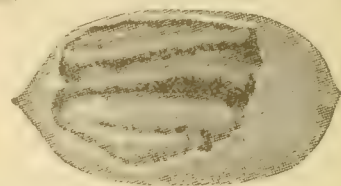
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In a concise booklet FREE. Every point mentioned from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale

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Seeds and Plants

SWEET CLOVER SEED. Greatest, quickest, cheapest fertilizing crop for orchards, groves, cotton plantations, truck lands, hay or pasture on sandy, swampy lands. Booklet, sample. **HASKELL & HASKELL**, Garden City, Kas.

Wanted---to Buy

Fruit of Citrus Trifoliata, the small three leaved orange used for hedges. In any quantity from a peck to a hundred bushels. Write for prices stating how much you can supply.

Citrus Fruit Co., Deer Park, Ala.

For Sale

FOR SALE Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. **C. W. RANSOM**, Houston, Tex.

FOR SALE. Back numbers of **THE NUT-GROWER**. Parties desiring to complete their files should send list of what they need. **The Nut-Grower Company**, Waycross, Ga.

For Sale

Two hundred and eighty acres—40 acres 20 year old pecans, balance good land at \$12.50. Terms. Very cheap—a splendid bargain. **Smith & Morgan**, **Dothan, Ala.**

G. H. Tomlinson
N U R S E R Y M A N
Putney, Ga.

Everything Suited to the South



The May Nut Cracker

The only dependable and successful cracker manufactured. Easy to operate, rapid and lasting. Postpaid anywhere in U. S. on receipt of \$1. Address **F. B. MAY**, Patentee, Wharton, Tex.

THE NUT GROWER

If reprinted in booklet form the story would be of great benefit to the general public and to the pecan industry.

Improved methods for bleaching walnuts are to be used by the California Walnut Growers Association this season, in which the use of sulphur is eliminated. It has been generally conceded that sulphured walnuts deteriorate more rapidly than unsulphured ones. This association will market a larger percentage of the crop than formerly, owing to its increased membership and its contracts to handle the output of several other associations.



Diseased Chestnuts

In the fall of 1913 reports were current that chestnuts gathered from blighting chestnut trees were disease producers, causing death to those who ate them. It was also reported that squirrels were dying from eating such chestnuts. Government scientists, as a result of such reports, have made an exhaustive investigation and have found such reports to be erroneous and that chestnuts from blighted trees are as good as those from healthy trees.



Blasting Conserves Moisture

Blasting the subsoil will prevent wet weather accumulations of surface water by storing it deeply and also prevents loss of vegetation during drouth by making this stored water available.



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COMBINES all the advantages of an up-to-date orchard; has no obligations to meet except to plant and properly care for the best pecan trees obtainable as extensively and as rapidly as its cash capital will permit.

This company is for the investor who cannot give personal attention to pecan interests. Shares \$10. Send for circular.

J. F. WILSON, Manager
and Horticulturist
WAYCROSS, GA.

60,000 Grafted Pecan Trees

Wholesale and Retail :: Special Price to Nurserymen

Satsuma Oranges and other Fruit Trees :: Leading Varieties Only
LAFAYETTE PECAN NURSERY, Lafayette, La.

Will You Help Boost Our Subscription Campaign?

We need more subscribers for THE NUT-GROWER. You can help us get them. If you appreciate the work we have been doing, lend us a hand and we can do even greater things in the future.

IN connection with the publicity work THE NUT-GROWER is doing in the interest of the Albany convention of the National Nut Growers Association, we are conducting a campaign for securing new subscribers as well as for swelling the membership of the association. We ask the cooperation of our patrons in this movement. They can greatly aid us by sending in the names and addresses of parties whom they believe to be interested in the industry.

It is also a significant fact that in the localities in which THE NUT-GROWER circulates regularly there are fully ten acres of fine up-to-date nut orchards for every copy going to that section, and with but few exceptions THE NUT-GROWER preceded the planting. This points a way for more orchards, the planting of which naturally makes a greater demand for trees. The wise pecan nurseryman not only advertises regularly in the official organ of the industry, but in addition makes generous use of our subscription department in paying for copies to be sent to names that he furnishes.

To names thus furnished we will send sample copies and other literature of interest.

The many people who read THE NUT-GROWER regularly are avoiding common mistakes, overcoming difficulties and making successes with their pecan operations. The failures are confined almost entirely to those who rely on their own expensive experience and those who do not know of the existence of such a journal as THE NUT-GROWER.

We give special and attractive rates to persons who send us ten or more subscriptions a year. Advertisers and others who desire to interest new people in the pecan evidently find this a good plan as they continue to use it from year to year, while a creditable percentage of those placed on our books by this method renew the subscription on their own account.

Active co-operation on the part of all of our friends, in sending us names as well as subscriptions, will be directly and indirectly an aid to the industry as well as to this publication.

THE NUT-GROWER COMPANY
Waycross, Georgia

Hawkeye St. Paul Company

THIS COMPANY HAS AN ATTRACTIVE PECAN PROPOSITION

THIS is simply a safe and sound business movement for utilizing the opportunities for profitable and permanent investment. The plan eliminates the risks, expense and worry of individual ownership of orchards. It is available either for the large or small investor.

Send for a copy of the HAWKEYE HARBINGER. It gives particulars and valuable information.

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Farm Manuals: J. B. Lippincott Company, Philadelphia, issue a list of six farm and orchard books on timely subjects.

The Thomas Idea: a handsome pamphlet of 64 pages, descriptive of the work of the Thomas Advertising Service, Jacksonville, Fla. Copy will be sent on request if reference is made to this mention.

The Hawkeye Harbinger; a four-page publication full of practical pecan information, announcing the organization and business offerings of the Hawkeye-St. Paul Company, Davenport, Iowa. Copy can be had on application.

Opportunities in Pecan Culture; by Wm. P. Bullard, Albany, Ga. An eight-page leaflet, being a reprint from the July NUT-GROWER of a paper read at the Quincy meeting of the Georgia-Florida Pecan Growers Association.

The Ellwood Pecan Co., Waycross, Ga., issues an eight-page folder descriptive of the plans and purposes of an orchard company organized by the editor of this journal in which his experience and facilities for orchard building are available for investment by interested people who are unable to handle or finance orchards of their own.

Bulletin No. 89 of the Georgia State College of Agriculture, dated June 1915, is a volume of nearly 300 pages, containing the proceedings of the Georgia State Horticultural Society and of several other state organizations which met at Athens, January 15-20, 1915. Several pages are devoted by the committee on revision of catalog of fruits and vegetables to the pecan. Of seventy-three varieties cataloged, ten are indicated as of commercial value and the leading varieties for the southern and coastal regions of the state. These ten varieties are Alley, Bradley, Curtis, Moneymaker, Pabst, President, Schley, Stuart, Success and Teche.

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

G. E. Pleas Plant Co.

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CHIPLEY, FLORIDA

Combination Offer

By arrangement with the National Nut Growers Association we are able to offer an annual membership and a year's subscription to THE NUT-GROWER for \$2.50. You can save money besides getting the big value this offer presents. Enroll promptly and get ready for a great convention at Albany this fall. Send remittance to J. B. Wight, Secretary, Cairo, Ga., or to THE NUT-GROWER, Waycross, Ga.



The National Nut Growers Convention

(Continued from page 102.)

interested in nut production can afford to miss the meeting.

You are cordially invited to come and get the benefit of the meeting, enjoy the hospitality of Albany, and see what has been done in an industry that has magnificent possibilities of future development.

The Badge Book, containing the list of members of the Association, program of the convention, and other information, will be mailed to members about October 10.

For further information write J. B. Wight, Sec., Cairo, Ga., or Wm. P. Bullard, Chairman Committee of Arrangements, Albany, Ga.



Northern Nut Growers

Our sixth annual meeting will be held at Rochester, N. Y. Sept. 1 and 2. Headquarters and assembly room will be at the Powers Hotel.

This date is chosen because it has seemed more important to inspect the many Persian walnut trees that can be reached from Rochester while they are carrying their crops than to see the nuts on the table. To this end a large part of the time of the meeting will be spent in excursions to these trees, probably in automobiles. There are many trees in Rochester itself, an orchard of over 225 bearing trees at East Avon, 18 miles

Free Book on Road Construction Will be Issued About August 1

Reserve Your Copy Now

We are just receiving from the printers a new book on road construction, which we believe will prove the most useful and valuable book of the kind ever issued. Our object in preparing it is to show the why and how of using



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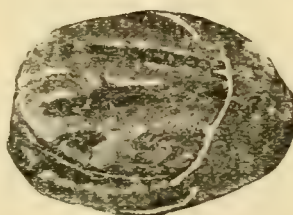
It is by no means confined to this method, but thoroughly covers every detail of road construction and maintenance, and the uses of all modern methods and appliances for this purpose. It is fully illustrated by halftones and original plan and sectional drawings. A copy will be sent free to any supervisor, path master or private party who has anything to do with building or maintaining roads.

Write to us at once and you will get one of the first copies issued. Ask for booklet No. 325

Good Roads Department

Du Pont Powder Company, Wilmington, Del.

SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

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Pecan Trees and Nuts
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C. M. Rood, Pres. Albany, Ga.

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

P. J. Berckmans Co.,
FRUITLAND NURSERIES,
AUGUSTA, GEORGIA.

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Season 1914-15

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The Oldest Exclusive Pecan Nursery.

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DeWitt, Georgia

Standard Varieties of Properly Grown Trees



Our many years of practical experience combined with the scientific study we have made of the industry enables us to supply to the best advantage the wants of our patrons.

Prompt attention to inquiries.

Send for Price List.



The G. M. Bacon Pecan Co.
DeWitt, Georgia

away, the Holden trees at Hilton and others at Victor, Fairport, Brockport, Holly and elsewhere. It will be possible to arrange an excursion to the Pomeroy orchard at Lockport, 65 miles away, and even to the numerous Canadian trees on the Niagara Peninsula.

Rochester is a city of nearly 250,000 inhabitants and the greatest nursery center in this country. The place and date should be particularly attractive to nurserymen who, as well as all others, whether members of the association or not, are particularly invited to be present and take part in the proceedings.

Few exhibits can be expected at this date, but some collections and specimens are promised and all persons are asked to bring nuts or other objects of interest.

The association offers a prize of \$50 for a hazel nut of unquestioned native origin that can compete with the imported filbert; \$10 for a better northern pecan; and \$20 to be divided as prizes for other nuts.

W. C. DEMING.

Georgetown, Conn. Secretary.



Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

P ECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition.

One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

THE NUT-GROWER COMPANY
WAYCROSS, GA.

The Nut-Grower

Volume XIV

September 1915

Number 9



TRAIN the understanding. Take care that the mind has a stout and straight stem. Leave the flowers of wit and fancy to come of themselves. Sticking them on will not make them grow. You can only engraft them, by grafting that which will produce them. Another rule of good gardening may also be applied with advantage to the mind. Thin your fruit in spring, that the tree may not be exhausted, and that some of it may come to perfection.

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Items of Interest

The Chinese use large quantities of walnuts, both for eating and for making cakes and candies.

Southern Nurserymen held their annual meeting at Hendersonville, N. C., the last week in August.

Remember the Albany convention date. Wednesday, Thursday and Friday, October 27, 28, 29th.

A Tennessee subscriber in renewing speaks of the Nut-Grower as a splendid publication on a most important subject.

Reports from the citrus growers of Louisiana for 1914 shows a production of 375,000 boxes. With new groves coming into bearing the 1915 crop is expected to be fully forty per cent larger.

A New Orleans company has an 8,000 acre tract near that city on which they have planted a large orange grove. It is divided into 1,250 five acre tracts, which have been sold largely to men from northern cities.

The California Almond Growers Exchange has substantially increased its membership, and now has enrolled about nine hundred names. This gives the association the control of about 80 per cent of the total crop for the state.

The native nuts of the Ohio Valley include practically all the nuts indigenous to the United States. The black walnut, butternut, chestnuts, hickories, pecans, beechnuts and hazel abound, though the lumber value of some of these primeval trees has caused their destruction at an increasing rate since the advent of civilization.

The development of commercial apple orchard movements in various sections of the country, notably in the North west, has been followed with keen interest by the pecan growers who have studied the situation in comparison with the pecan. In the Pacific coast country the production has reached as many as 25,000 ear lots in one season. This year however the crop is short about 30 per cent.

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THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., SEPTEMBER 1915

NUMBER 9

PECAN ROSETTE

BY J. W. FIROR

A Paper read at the Quincy meeting of the Georgia-Florida Pecan Growers' Association

IN the garden of Dr. W. H. Doughty, Jr., Augusta, Ga., there are a number of pecan trees. These trees grow in the fertile soil of the Savannah valley. With the exception of one tree all have made a splendid growth and have borne good crops. The one exceptional tree has had rosette for a number of years.

Recommendations for the cure of the rosette have been published from time to time. Some of these have been tried on this tree. One year the tree received an application of bluestone; another, lime and bluestone, and still another, lime and stable manure. Other soil treatments have been used.

This tree has been under my observation for the last three and a half years. It rosette in 1911, 1912, 1913, but during the summer of 1914 the rosette apparently disappeared. None of the noticeable symptoms were observed during last year. Did the use of lime or bluestone or manure or a combination of these materials cause this tree to throw off the rosette for one year? Or did the tree just accidentally recover?

In the spring of 1912 the Horticultural Department of the College put down some tests, following the scattered recommendations of that time.

TEST WITH FERTILIZER MATERIALS IN FIVE YEAR OLD ORCHARD

In a five year old orchard in Jefferson county an eight plat test with commercial fertilizer materials was laid down. The plats each contained 14 trees, most of which were rosetted. The trees had been planted all at the same time and conditions of soil, drainage, etc., were uniform as far as could be observed. Cultivation and cropping throughout the test was across the plats so this also was uniform. The plats were treated as follows:

- Plat 1. 1000 pounds ground limestone, 1912.
- Plat 2. 313 pounds of acid phosphate in 1912; same 1913, 1914 and 1915.
- Plat 3. Check.
- Plat 4. 80 pounds muriate of potash, 1912, 1913, 1914 and 1915.
- Plat 5. 100 pounds nitrate of soda, 1912, 1913, 1914 and 1915.
- Plat 6. Check.

Plat 7. 313 pounds acid phosphate, 80 pounds muriate of potash and 100 pounds nitrate of soda, 1912, 1913, 1914 and 1915.

Plat 8. 1000 pounds of ground limestone in 1912, and 313 pounds acid phosphate, 80 pounds muriate of potash and 100 pounds nitrate of soda in 1912, 1913, 1914 and 1915.

This test was repeated in a nine year old orchard with the additional tests as follows:

- Plat 10. Check.
- Plat 11. One half pound bluestone per tree, 1912 and 1913.
- Plat 12. One-half pound bluestone and 50 pounds of lime per tree.
- Plat 13. Check.
- Plat 14. 1 pound bluestone per tree, 1912 and 1913.
- Plat 15. 1 pound bluestone and 50 pounds of lime per tree.
- Plat 16. Acid phosphate, muriate of potash, 1913, 1914 and 1915.

Plat 17. Acid phosphate and sulphate of ammonia 1913, 1914, 1915.

Plat 18. Muriate of potash and nitrate of Soda. A block of 90 trees were subsoiled by the use of dynamite in the spring of 1913. 90 other and adjacent trees were used as check on these trees. Tests with manure, mulching, other chemicals, etc., are under way.

RESULTS OF TESTS IN 5 YEAR OLD ORCHARD

Plat 1. 1000 lbs. ground limestone in 1912. 12 trees.

- 1913 9 trees with rosette, 3 free.
- 1914 10 trees with rosette, 2 free.

Plat 2. 313 lbs. 15 per cent acid phosphate in 1912, same in 1913, 1914, 1915.

- 1912 12 with rosette, 2 free.
- 1913 12 with rosette, 2 free.
- 1914 11 trees with rosette, 3 free.

Plat 3. Nothing (check).

- 1912 13 trees with rosette, 1 free.
- 1913 12 trees with rosette, 2 free.
- 1914 11 trees with rosette, 3 free.

Plat 4. 80 lbs. muriate of potash in 1912, same in 1913, 1914, 1915.

1912 13 trees with rosette, 0 free.

1913 9 trees with rosette, 4 free.

1914 11 trees with rosette, 2 free.

Plat 5. 100 lbs. nitrate of soda in 1912; its equivalent in sulphate of ammonia in 1913, 1914, 1915.

1912 14 trees with rosette, 0 free.

1913 11 trees with rosette, 3 free.

1914 13 trees with rosette, 1 free.

Plat 6. Nothing (check.)

1912 14 with trees rosette, 0 free.

1913 13 trees with rosette, 1 free.

1914 10 trees with rosette, 4 free.

Plat 7. Complete.

1912 13 trees with rosette, 1 free.

1913 12 trees with rosette, 2 free.

1914 9 trees with rosette, 5 free.

Plat 8. Complete with lime in 1912.

1912 13 trees with rosette, 1 free.

1913 13 trees with rosette, 1 free.

1914 12 trees with rosette, 2 free.

Plat 9. Orchard treatment.

1912 14 trees with rosette, 0 free.

1913 12 trees with rosette, 2 free.

1914 11 trees with rosette, 3 free.

HOUSECUT FIELD

Plat 1. Check.

1911 8 rosetted trees, 2 free.

1913 4 rosetted trees, 6 free.

1914 3 rosetted trees, 6 free.

Plat 2. Ground limestone 1912.

1911 10 rosetted trees, 0 free.

1913 5 rosetted trees, 5 free.

1914 4 rosetted trees, 6 free.

Plat 3. Acid phosphate.

1911 5 rosetted trees, 1 free.

1913 7 rosetted trees, 3 free.

1914 3 rosetted trees, 7 free.

Plat 4. Check.

1911 8 rosetted trees, 2 free.

1913 6 rosetted trees, 4 free.

1914 1 rosetted tree, 9 free.

Plat 5. Muriate of potash.

1911 8 rosetted trees, 2 free.

1913 6 rosetted trees, 4 free.

1914 5 rosetted trees, 5 free.

Plat 6. Nitrate of soda.

1911 5 rosetted trees, 5 free.

1913 4 rosetted trees, 6 free.

1914 7 rosetted trees, 3 free.

Plat 7. Check.

1911 8 rosetted trees, 2 free.

1913 5 rosetted trees, 5 free.

1914 6 rosetted trees, 4 free.

Plat 8. Ground limestone, acid phosphate, muriate of potash, nitrate of soda.

1911 7 rosetted trees, 2 free.

1913 6 rosetted trees, 1 free.

1914 5 rosetted trees, 4 free.

Plat 9. Acid phosphate, muriate of potash and nitrate of soda.

1911 7 rosetted trees, 3 free.

1913 8 rosetted trees, 2 free.

1914 1 rosetted tree.

Plat 10. Check.

1911 8 rosetted trees, 2 free.

1913 6 rosetted trees, 4 free.

1914 6 rosetted trees, 4 free.

Plat 11. 1-2 lb. bluestone per tree 1912, 1913.

1912 10 rosetted trees

1913 7 rosetted trees, 3 free.

1914 5 rosetted trees, 5 free.

Plat 12. Ground Limestone, 1 lb. bluestone.

1911 8 rosetted trees, 2 free.

1913 9 rosetted trees, 1 free.

1914 7 rosetted trees, 3 free.

Plat 13. Check.

1911 10 rosetted trees

1913 9 rosetted trees, 1 free.

1914 9 rosetted trees, 1 free.

Plat 14. 1 lb. bluestone per tree, 1912 and 1913

1911 8 rosetted trees, 2 free.

1913 8 rosetted trees, 2 free.

1914 7 rosetted trees, 3 free.

Plat 15. Ground limestone. 1 lb bluestone per tree.

1911 10 rosetted trees.

1913 9 rosetted trees, 1 free.

1914 8 rosetted trees, 2 free.

Plat 16. Acid phosphate, muriate of potash.

1911 9 rosetted trees, 1 free.

1913 8 rosetted trees, 2 free.

1914 9 rosetted trees, 1 free.

Plat 17. Acid Phosphate, Nitrate of Soda.

1911 8 rosetted trees, 1 free.

1913 8 rosetted trees, 1 free.

1914 6 rosetted trees, 3 free.

Plat 18. 40 lbs Muriate of Potash, Nitrate of soda.

1911 7 rosetted trees, 3 free.

1913 7 rosetted trees, 3 free.

1914 5 rosetted trees, 5 free.

PREVALENCE OF ROSETTE

A block of 481 6-year trees of the Stuart variety were examined for the rosette in the fall of 1913 and it was found that 257 were free and 224 rosetted. In the fall of 1914 this same block showed 224 healthy and 257 rosette; 33 trees having been added to the list in one year.

In a block of 812 10-year-old trees of several varieties and seedlings there were 468 rosetted in 1913 and the same number in 1914.

The conclusions that I draw from the work that has been given above are as follows:

1. Trees which show marked signs of rosette

for a number of years may suddenly go through a year without any of the symptoms. This has happened with the tree mentioned at the start of this discussion, with a few trees in the different test plats with a few in the plats which were not given any special treatment with trees in the orchard proper.

II. Trees which show a slight sign of rosette one year not uncommonly recover the next.

III. So far the tests with different fertilizers and chemicals have not shown sufficient difference from the checks to warrant the conclusion that they were either benefitted or injured by such treatment.

IV. Somewhere within nature's locked law book there is undoubtedly a fundamental reason for rosette. How long it will take to find it, it is impossible to tell.



HOW TO GROW FIRST-CLASS NUTS

By W. W. BASSETT

Read at the Quincy meeting of the Georgia-Florida Pecan Growers Association.

MY predecessor has so very ably and fully covered the subject that I feel little more need be said. If we will go home and carry out his directions we can all produce first-class nuts. We all desire to grow the best pecan nuts that can be grown; the subject is so broad that it covers every feature of the pecan business up to placing them on the market, therefore, if I touch on some of the points just covered by our worthy president, I trust that it will only serve to emphasize them the more.

If I were to treat the whole subject, I would divide it under four heads: Moisture Supply, Food Supply, Protection from Insect and Fungus Pests, and The Right Man. I am going to confine my remarks, mainly, to the first of these divisions.

MOISTURE SUPPLY

First-class pecan nuts cannot be grown unless the tree be furnished with an even supply of moisture from blooming time until harvest. Moisture is the carrier of all nourishment taken up by the tree for the growth of wood and fruit. You have just listened to the great need of plant food and the proper amounts of the different plant food elements to use. With these all present, and every other condition ideal, with the exception that moisture be short at critical periods through the growing season, we cannot produce first-class nuts. Many of us have not given this phase of the subject enough thought. Our rainfall through the growing season is abundant, but how much of it is kept available and how much of it is wasted?

We have all noticed the variation in size of Schley nuts, of Stuart and other varieties compared together from different pecan sections, and very often from different trees in the same grove, and from the same trees when two different crops are compared.

An uneven supply of moisture is largely responsible for this, and it is more so with the pecan than the soft fleshed fruits. Most of us have seen a peach or apple crop that was undersized and a few weeks before harvesting time there would come frequent showers, causing the fruit to grow to nearly normal size. This could not be true of the pecan, and other nuts, for there is a critical stage during the hardening of the shell two or three months before maturity, and after which an added supply of moisture will not materially affect the size. Therefore, an even and plentiful supply of moisture just at this period, is equally important to an abundance of plant food, and when we have insured this moisture supply, not by irrigation, for we do not need that, but by scientific methods of cultivation, soil building and maintenance, we have done much toward supplying the necessary plant food and the right condition for it to be made available.

To get the highest percentage of first-class nuts from any individual tree, or grove, we must provide ideal conditions as regards moisture and food all the way through the growing season, we must keep them hustling all the time, and the finishing off process is even more important than growth in the early stages. If we neglected the finishing off process in growing fat cattle and hogs, how many of them would bring top prices? This watchful care to see that the tree is not suffering for moisture, or food, through the last stages of nut growth, is the very thing that will make first-class nuts out of what would otherwise largely be second and third class.

The dropping of the immature nuts in June by many trees is also largely caused by an insufficient supply of moisture. I have noticed seedling trees drop more than half of their crop during a dry spell in June, and the same trees other years, during more favorable moisture conditions, would hardly drop a nut. Thus we begin to see the great importance of a constant supply of moisture, if we are to produce a large crop of first-class nuts.

Deep plowing, cultivation and the return to the soil of crops for the formation of humus are prime factors in regulating this even supply of moisture to the pecan tree, but the most necessary of all is humus. Humus is the very life of the soil, and without which, we can grow no highly developed crop. You tobacco growers were very quick to find this out, you have found that stable manure furnished this in a very desirable form and that it also furnished a good medium for bacterial action, so necessary in making plant food available. Humus acts as a sponge in taking up water during a heavy rainfall and holding it through periods of drought; it loosens up the soil, improving the physical qualities, permitting aeration, equalizing temperature, etc. Soils deficient in humus are cold and wet in moist weather.

(Continued on page 124)

The Nut-Grower

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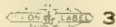
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New uses for nuts are always of interest and we are always glad to have reports showing how domestic science in progressive households utilizes the pecan and other nuts in preparing palatable and nutritious dishes or confections.



The dominant feature of the October issue of The Nut-Grower will be a graphic editorial write-up of the initial orchard of the Albany district. This may be reprinted in attractive booklet form and distributed at the convention as a souvenir of the occasion, and subsequently used as an advertisement for the locality.



Climatic conditions which have injuriously affected cotton and other crops this season in the pecan belt, may or may not be responsible for the unusual dropping of the nut in various localities. While early in the season there was promise of an ordinary crop, still the more recent estimates show a loss of probably 25 per cent.



The Daily Commerce Reports, a Government publication is a great aid to the business man who desires a general knowledge of commercial operations. This is one of the few government publications for which a subscription price is charged, being listed at \$2.50 per annum. From this publication we glean important items of interest to our readers, especially the data bearing on importation of nuts and information regarding crop conditions in foreign countries.



Some years ago and before we were as well posted as we now are as to the possibilities with the

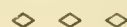
pecan, we urged that if farmers would plant a few pecan trees and give them proper attention, that they in turn would bring in later and at the right time of the year, the money we all have to produce to pay the taxes, which are always with us and cannot be avoided. How nice it would be if this was eliminated by such a simple method.



Oil-bearing nut trees in the Philippines is the subject of an interesting contribution in a recent issue of the Daily Commerce Reports. A tree which is widely distributed on the islands and known by a variety of names yields seed or nuts which produces 45 per cent of a dark fatty oil. The tree is of the order to which the "santol," a fruit commonly eaten in the Philippines, belongs. The name of the tree—well it is some name, whether you can pronounce it or not—is *Chisochiton cumingianus* Harms.



As the years go by there is an increasing interest in the use of nuts as food. This is a wonderful field in which there is certain to be great development in the future. When we are told that a pint of pecan kernels contains enough food elements to supply the daily necessities of an active man, we see visions of the prepared foods which will be models of convenience and so cheap, when the nuts become less expensive, that the high cost of living will be given wings for passage to other shores.



One of the side lines which fits nicely with a modern pecan grove is bee-keeping. This not only supplies a source of additional revenue when properly managed, but also contributes to better results with the orchard operations. It has been conclusively shown that bees are a potent factor in pollinizing blossoms of many fruits. Besides the pecan territory is rich in natural bee supplies while many other plants and trees which can be successfully grown are producers of bee food for a considerable portion of the year.



While at present the greatest activity in pecan planting is in the line of commercial orchards, the small plantings by farmers, and the owners of suburban homes aggregates a large acreage each year. In fact, this is the ideal way for the industry to grow, and through the pecan belt every farm and home should have its nut orchard. This is the custom in foreign lands which now export almonds and walnuts to this country in large quantities; the farms have nut trees planted along lanes and highways, about the farm buildings and in other out of the way places and the crops are marketed readily just as other farm products are handled.

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WITH THE EDITOR AND HIS CORRESPONDENTS

Takes Issue with Matz

Editor NUT-GROWER:

I wish to call your attention to a misleading if not a mistaken statement in the August number of your paper. It is a supposed quotation from a bulletin of the Florida Experiment Station by Mr. Julian Matz. He speaks there of winter killing of pecan trees. He conveys the impression that such injury is doubtful and is usually to be attributed to boring insects. There is no foundation for this view. Winter killing is a very distinct and often prevalent trouble with pecan trees. The past winter was especially severe on the trees and large numbers of them were killed unquestionably by the frost.

The Pin Hole Borer of which he speaks as causing the death of the trees is entirely secondary. They invariably attack dead or dying trees and their presence often misleads growers into thinking that they are the cause of the trees death. It will be found however that in every case the tree is doomed before these borers attack the tree.

In some cases where these borers are allowed to breed in the dying tree they become so numerous that they will single out some weak and unhealthy trees and attack them, causing or hastening their death. For this reason the winter killed trees should be cut and burned as soon as possible. The remaining trees can then be white washed to avoid the borers from seeking out the weak or unhealthy trees. A plain white wash with a little salt added to make it stick has been found to be as effective as more complicated washes.

A careful examination will show that these borers enter the wood

of the tree and do most of their work there and not under the bark. The flat-headed borer is also common on pecans and often kills trees, especially young ones, by girdling them under the bark. The attacks of this borer should not be confused with the above mentioned borer.

It is unfortunate for misinformation to be allowed to spread and I therefore take this means of correcting the probably effect of the before mentioned note. Winter killing is a very distinct trouble and certain things are conducive to such injury and should be avoided. Late cultivation and fertilization are two very important factors in this trouble and both should be strictly avoided. Very severe loss in one grove which came to my attention this past year was caused entirely by a combination of these two evils.

C. S. SPOONER,

Asst. State Entomologist.
Thomasville, Ga.



Wants Pecan Statistics

Editor NUT-GROWER:

I am directed by Leon M. Eastland, of the Federal Department of Agriculture, to inquire of you for any statistics you might have on nut industries.

What I would like to get if possible, is the approximate tons of pecans that have reached the channels of commerce.

If you are in a position to furnish this information I shall appreciate very much receipt of same.

BEN. F. CHAPMAN,

Chief Clerk, Texas Dept. of Agriculture.

[While no systematic statistics have yet been prepared showing tonnage of pecans reaching commercial channels, still we have

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some general knowledge of such movements. Your state furnishes from 200 to 600 cars a year of native seedling nuts. With other sections of the country and the improved varieties, the new orchards are only now coming coming into bearing, and the past season was the first year that shipments reached car lot bulks. Baconton, Ga., had 40 tons last year. Albany, Putney and DeWitt, Ga., aggregated 80 tons. Other points in Georgia and Florida supposedly had 15 tons. All of these shipments were the products of budded trees. In this same territory a considerable production of fine seedling pecans was marketed but such stock as well as a considerable part of the yield from budded trees found local market.—Editor]

◇ ◇ ◇

"It is estimated that the Albany district has about five-twelfths of the area in the United States, planted to the budded and grafted

THE NUT GROWER

varieties of pecans, thus easily making Albany the hub of the pecan universe. I can clearly see in prophesy large grading and packing plants and nut-shelling concerns here. This will be true if there is harmony and unification in the industry and if the citizens here are receptive and helpful to take advantage of our many and great pecan commercial possibilities."—W. P. Bullard in Albany Herald.

◇ ◇ ◇

How to Grow First-Class Nuts

(Continued from page 121)

very hot and dry through periods of drought, they have no reservoir capacity and are subject to washing through times of heavy rainfall. The nitrifying and denitrifying bacteria cannot live and work in soils devoid of humus and the value of most commercial fertilizer put on them is lost.

Unfortunately a large part of our commercial pecan acreage has been planted on these kind of soils and before we can expect to grow first-class nuts we must build up the soil in its organic content. We have the cart before the horse, so to speak, for this soil building should have preceded the plant-of the grove and on through its first few years of growth, then at bearing age we would be realizing those fine pecan nuts we have been dreaming about. Most of us have been trying to grow too many acres in grove and have not been intensive enough: first-class nuts are not produced on extensive areas without intensive practices at the same time.

I believe the bearing grove should have some growing crop on the ground through the winter to prevent erosion and the loss of nitrates by leaching. This crop can be one of the legumes or one of the cereals, as best suits the conditions; at the beginning of the upbuilding period, oats will probably give the best satisfaction, in the late winter they should be

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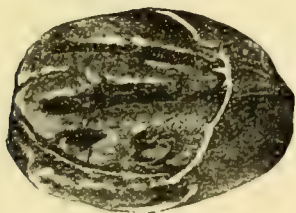
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grazed off or turned under for soil improvement. Through the Georgia-Florida pecan belt, April and May are usually dry and no intercrops should be grown to rob the trees of moisture. Some form of surface cultivation should be given through this time; the Forkner light draft harrow makes a fine implement for this purpose. The frequent showers of early summer will afford plenty of moisture for the trees and provide enough to grow some cover crop to shade the soil and serve as a mulch through the hot dry periods later on when the critical time in determining the size of the nut is at hand. I have no data or records to prove just when this time may be, but I believe it to be between August first and the early part of September, depending upon the variety and the season. For this cover crop, I prefer the cow pea, planted in drills with two or three cultivations before they cover the ground. No matter what the cover crop may be, be sure to start the mowing machine at the first approach of a dry spell, in August or early September. If no crop can be grown, I believe it will pay to haul oat straw, or other litter at hand, and cover the ground quite thickly. I do not believe in any half way methods in applying this mulch, too much cannot be applied, if it be extra heavy it may not be necessary to grow a winter cover crop. I feel that I cannot emphasize the need of the winter and summer cover crops too much, the one to prevent leaching and washing, the other to serve as a mulch and soil builder. Unless some other unusual practices are followed, these are absolutely necessary for maximum returns. Had more attention been paid to the soil improving crops, and their consequent effect in controlling moisture conditions during the early years of the pecan tree's growth, we would have hardly gotten acquainted with the rosette and many of our other pecan diseases.

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Subscription \$1 per Year

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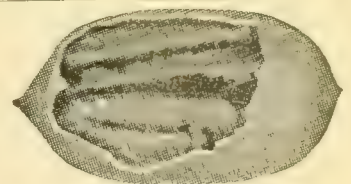
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growing well root-
ed budded and
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Careful attention given all orders.
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**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

I am not going into further detail, I only wish to emphasize the principles: the details must be worked out by each individual and to suit local conditions. A large number now engaged in the pecan business are going to make a failure of it, but it will be the fault of the man, not the business. Every one of us here assembled can make it a success if we will put our brains and hands to work, and keep them at work until the victory is won. The business of growing first-class pecan nuts is well worthy of man's keenest endeavor and thought, to get right down to studying the needs of each individual tree, to put one's whole self into the attainment of the object desired, only such methods will succeed.



A correspondent in discussing the Satsuma orange stresses the importance of cultivation by saying, "The best way to work Satsumas is to work them very, very good, until September first and then no more at all. Work each tree like it was the only tree you had and that you was most crazy about it; make it a pet and then do each other tree the same way. A little fertilizer in the spring goes a long way too."



So far as the almond crop in California goes this year, while it is less than a normal crop per acre the total tonnage, owing to the increased acreage of recent years, should turn out a good average. Several sections are, however, light in their output per acre.



Nut Cheese Balls

Grate or pass through a food cutter remnants of cheese. If dry moisten with melted butter or cream. Mix with an almost equal quantity of finely chopped hickory nuts and half quantity of chopped candied cherries. Mold into balls, put whole nut meat on top. Serve in nest of lettuce leaves with salad dressing.

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Fruit of Citrus Trifoliata, the small three leaved orange used for hedges. In any quantity from a peck to a hundred bushels. Write for prices stating how much you can supply.

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FOR SALE Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. **C. W. RANSOM**, Houston, Tex.

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Near the town of Patterson, Pierce county Georgia, is the parent tree of the Laura Sellars pecan. It has a local reputation for being a good bearer and has repeatedly yielded crops of over one hundred pounds, although the tree is said to be only about twenty years old. The fame of the variety consists in the extreme size of the nut as well as its great longitudinal measurement. While a good cracker and fair quality, it is common with large nuts of this shape, is sometimes deficient in respect to plump and full kernels.



Citrus Exchange Finds Middlemen Necessary

There has been much discussion of recent years about the elimination of jobbing and distributing middlemen. There has also been a general opinion that the California Fruit Growers Exchange has been a successful cooperative movement and accordingly its opinion should be of value. In the matter of the middleman's distributing service we find the following opinion of the California Fruit Growers Exchange as expressed by its general manager, G. Harold Powell, in his just submitted annual report:

The May Nut Cracker



The only dependable and successful cracker manufactured. Easy to operate, rapid and lasting. Postpaid anywhere in U. S. on receipt of \$1. Address **F. B. MAY**, Patentee, Wharton, Tex.

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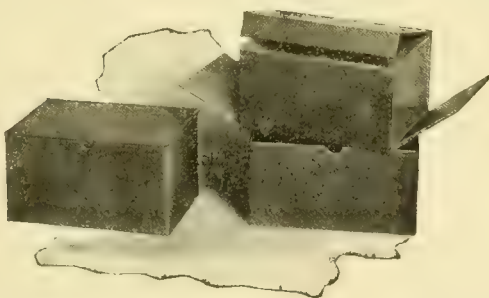
This company is for the investor who cannot give personal attention to pecan interests. Shares \$10. Send for circular.

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WAYCROSS, GA.**

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The Standard Railroad of the South

Reaches Albany, Georgia, on its own rails from and via Richmond, Va.; Charleston, S. C., Savannah, Waycross and Thomasville, Ga. Account the National Nut Growers' Convention to be held at Albany, October 27, 28 and 29, 1915, reduced rates have been authorized on the "Certificate Plan" from practically all points in the Southeast. Ask the agent for a "certificate-receipt" with your ticket and see that he routes you via the ATLANTIC COAST LINE. For schedules, maps, folders, rates, etc., write

T. C. WHITE, G. P. A. **E. M. NORTH, A. G. P.** **L. P. GREEN, T. P. A.**
Wilmington, NC. Savannah, Ga. Thomasville, Ga.

"The Exchange cannot perform the function of the jobber or of the retailer as efficiently or as economically as it is now performed. To increase the expense necessary to distribute the citrus fruit crop to 300,000 retailers or to 100,000,000 people and to perform the services which are demanded of each would be destructive to the interests of the grower."—California Fruit News.

◇ ◇ ◇

Roadside Tree-Planting

A unique and distinctive feature of road-building in the Far West (California) is the planting of nut bearing trees along both sides of the road-way, such as pecan and English walnut. They serve a double purpose: bearing fruit and furnishing shade. No state in the union has better public highways than California, and, while they cost money, the cost is a mere quibble when the enormous benefits accrued therefrom are considered. In the matter of trees

there is none better suited for roadside planting than our native pecan, for it is a most productive fruit-bearer and is almost unsurpassed as a shade tree.

◇ ◇ ◇

Does The Chestnut Bark Disease Occur in Your Region?

During the eleven years the chestnut bark disease has been known to exist in the United States, it has spread from its original point of introduction with such rapidity that it now covers the northern half of the native chestnut zone and has destroyed a number of chestnut orchards.

Recent discoveries of new spots of infection have impressed the danger of its spread by means of infected nursery stock far beyond the limits of the infected region. For example, a young infected tree not long from the nursery, has recently been discovered at Lincoln, Nebraska.

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

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Pecan Trees and Nuts
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Send for a copy of the HAWKEYE HARBINGER. It gives particulars and valuable information.

Hawkeye-St. Paul Company

68-69 First National Bank Building
DAVENPORT, IA.

It is not beyond the bounds of possibility that the disease may be found in any nursery in the United States which has in recent years imported chestnut stock from the diseased region in the eastern United States or from the Orient.

The rapid destruction of the chestnut crop of the east makes possible the development of chestnut orchards in the West, far away from where the native chestnut grows. But to succeed with these the stock must be absolutely clean and the disease must not be introduced. The nurseries must be kept clean.

Every inspector, pathologist and nut grower in the country should co-operate with the Department of Agriculture in a survey of the chestnut nurseries of the country.

Carefully examine the chestnut stock in the nurseries in your region. Watch the nursery stock that is coming into the region from every source. Mail to the Department ample specimens of every suspicious tree which you may find.

◇ ◇ ◇

Personal Mention

Mr. A. A. Rich, formerly of Lamont, Fla., is now located at Foley, Ala.

J. B. Wight, of Cairo, Ga., secretary of the National Nut Growers Association has been spending several weeks on the Pacific Coast taking in the exposition.

Dr. T. G. Starbuck, of Davenport, Ia., for years past a subscriber to the The Nut-Grower, is president of the Hawkeye-St. Paul Co., which has a large and promising pecan orchard in Louisiana.

Dan Lott, of Waycross, Ga. well known in real estate circles, is giving increased attention to pecans. He has had a good example set him by his father who has been selling \$250.00 worth of pecans per acre from a four acre grove yearly.

Judge C. M. Wise, of Fitzgerald, Ga., one of the prominent and

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at Glen Arden Farm. Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

G. E. Pleas Plant Co. "GLEN ARDEN FARM"
CHIPLEY, FLORIDA

earliest of the pecan growers of that section, died at his home on September 3rd. Mr. Wise was actively identified with the movement which established the Old Soldiers' colony which grew into the modern city of Fitzgerald.

On Tuesday, the 10th of August Col. G. B. Brackett, Pomologist of the Department of Agriculture, died. For many years Col. Brackett had held this exalted position and was considered one of the foremost pomologists of the world. His special field was systematic pomology, and his word was beyond question concerning varieties of fruits.

H. P. Atwater, who will be well remembered by some of those who attended the earlier nut grower conventions, is forming a collection of edible nuts of all kinds, which he expects to display at various fairs and expositions. He is having difficulty in locating specimens of the MacAllister and other varieties of hicans. Any of our readers who can supply him will be contributing to a commendable enterprise. His address is 2120 Genesee St., Houston, Tex.



The Pecan Industry

An important and growing industry in the Southeast will be represented at the National Nut Growers Convention to be held in Albany, Ga., next October. It is expected the gathering will be attended by nut growers from all sections of the country that are adapted to the growing of pecans or other nuts of food and marketable value.

The pecan industry is expanding rapidly in sections of the Southeast. It is profitable and inviting, and is helping to attract more people to this part of the country.

—INDUSTRIAL INDEX.



Books and Catalogs

Road Construction and Maintenance: an illustrated pamphlet

Vertical Farming PROVED

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Effects of
Orchard
Blasting

with

DU PONT

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showing comparative growth of pear
trees from Spring of 1913
to Aug. 1, 1914, Bellemont
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IN BLASTED GROUND

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This proves the truth of the principles of Vertical Farming, which aims to cultivate downward as well as to till the top soil.

Three years ago tree planting in blasted holes was experimental—now millions of trees are set out by the Vertical Farming method every spring and fall.

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TREES GROW

For years past we have shipped more pecan trees than any other nursery man. At least one third of the pecan acreage in the Albany district is planted with trees grown by us. Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

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Season 1914-15

Will be pleased to book orders now for Grafted Pecans

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DeWitt, Georgia

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Prompt attention to inquiries.

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The G. M. Bacon Pecan Co.

DeWitt, Georgia

of 120 pages of general information on an important subject. The DuPont Powder Co., Wilmington, Del.

Modern Silage Methods; a 264 page pamphlet giving a large amount of disinterested information regarding the construction and filling of silos, with a treatise on feeding and rations. Published at a nominal price by the Silver Manufacturing Co., Salem, Ohio.

Agriculture of Massachusetts; sixty-second annual report of the secretary; 1914; a fine volume of over 600 pages with many fine illustrations and complete index. A number of timely and carefully prepared papers by specialists are included with various reports of the activities of the State Board.

The Country Home; A Guide to County Living; by Edward Irving Farrington. Published by Laird and Lee, Chicago, Ill. Size 7x8 1-2 inches, substantially bound. Price \$1.50. This work abounds with practical suggestions and monthly reminders which can be readily utilized by those who wish to have beautiful and profitable homes.



Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

P ECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition.

One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

THE NUT-GROWER COMPANY
WAYCROSS, GA.

The Nut-Grower

Volume XIV

October 1915

Number 10



WHEN have certain work
to do for their bread,
and that is to be done stren-
uously; other work for their
delight, and that is to be
done heartily; neither is to
be done by halves or shifts,
but with a will, and what
is not worth that effort is
not to be done at all.

—RUSKIN.

10c per Copy

\$1.00 per Year

THE NUT GROWER

About the Convention

The meetings of the Association will be held in the Courthouse, which is centrally located and within a short distance of all the hotels.

The Question Box will be one of the features of the meeting. Questions will arise that are not answered in addresses and papers on the regular program. Write these out, hand to the secretary and, if of sufficient interest, they will be answered by some of the many experts present. Some most valuable information is brought out by the questions.

There will be an exhibit of nuts, nut crackers, etc., which will be of special interest to visitors. Those desiring information in regard to exhibits are referred to Mr. C. A. Reed, of the Bureau of Plant Industry, Washington, D. C., chairman of the committee on Exhibits, or to Mr. Wm. P. Bullard, Albany, Ga., chairman of the committee of Local Arrangements. Those having nuts, especially new and interesting varieties, are invited to bring or send samples for exhibition. All exhibits will be mentioned in the printed proceedings.

One of the most interesting features of the convention will be a demonstration of the various uses to which pecans can be put in the preparation of various articles of food. These demonstrations will be held in close proximity to the convention hall and at such hours as will enable all to get the benefit of them. They will be under the supervision of Miss Randall, head of the domestic science department of the State Normal College at Athens, Ga., and will be of especial interest to all lady visitors.

Of special interest to visitors and members is the announcement by Secretary Mock of the Albany Chamber of Commerce that on the same dates as those of the convention will occur the Fall Harvest Festival at Albany. A most in-

(Continued on page 140.)

President Pecan--

NONE BETTER

**Pecan Growing
Made Easy**

...ing with en-
...develop-
...few nurser-
...ies have such trees.

Made Profitable

...y planting only genuine bud-
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Best Budded Pecan Trees

...great quanti-
...Our stock
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...budding wood.

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...Jones

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**Pecans
Satsumas**

**General line of
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Every shipment
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Your patronage
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Budding Tool

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Pecans, Hickories, Walnuts,
Chestnuts, Persimmons and
all other trees.

Buds and Grafting Scions

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Ga., DeWitt, Ga., Hardaway, Ga.,
Albany, Ga.*


THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., OCTOBER 1915

NUMBER 10

DEWITT—PIONEER PECAN POINT

 TWENTY seven years ago, to be exact, in October 1888, the writer began his horticultural operations in South Georgia. The growing of nursery stock in a small way, which included seedling pecans and in turn the planting of various fruits in an experimental way was followed up for several years, until the commercial prospects with pecans led to his special work in this line which has since been continuously followed. In the early 90's his place at Poulan, Ga. known as Piney Park Nursery, which was later a part of the Keystone Fruit Company, was visited by Mr. G. M. Bacon, of DeWitt, Ga., who made a purchase of several hundred grape vines. This was our first meeting, and was brought about by a mutual business acquaintance, Mr. R. H. Warren, of Albany, Ga., if memory serves me right, although the name of Nelson F. Tift comes to mind in this connection. While the writer's location was twenty-two miles east of Albany, Mr. Bacon's place was at DeWitt, thirteen miles south of the same railroad center. However, Albany was the touch point, and the years which followed this meeting led to the closer relations which proved fruitful in the founding of a new industry.

At this initial meeting, the pecan was the link which connected these men in a way that subsequently produced history. While the nursery at Poulan was producing general nursery stock, that at DeWitt which had been established two or three years earlier, was specializing in pecans. Pecan orchards were planted at both places as soon as trees were large enough to transplant. At Poulan, one year seedlings were used, and the first nuts were gathered six years later. During this period, and for several years previous, the planting of seedling pecans had been attracting considerable attention and orchards had been started at several other points. This was the time when attention was being directed to choice varieties and when the first budded and grafted trees were being introduced into Georgia territory. It was also the time when the fake pecan dealer was gathering in his harvest of dollars, for which he exchanged inferior seedlings with a guarantee that they would produce nuts like the elegant sample he displayed.

This brings the story up to the organization of the National Nut Growers Association and the found-

ing of the Nut Grower, which has been previously recorded.

With this introduction we reach the objective point of this sketch, DeWitt, the home place of Mr. Bacon and the location of his orchard and nurseries as they now appear after thirty years of pioneer work.

There is a peculiar fitness in our giving at this time a brief story of this place, since it will be visited on one of the convention days by the members and friends of the National Nut Growers Association. We make no claim to writing a history of this interesting place, or to recording all the labors and achievements of Mr. Bacon and his associates. We simply intend to weave a simple story, and that entirely from our observation and memory, which will help the visitors at the convention to appreciate and enjoy the occasion of their visit to DeWitt. Other orchards included in the day's itinerary may be more extensive in area, more modern in the selection of varieties, but it is from DeWitt that the inspiration comes. This is where all of the best known varieties were subjected to the severe test which showed their comparative value; where the demonstration of cultural methods was made and where the early fights on insect foes and bacterial troubles were made; the place where many of the now popular varieties were first fruited in Georgia.

Nuts grown at DeWitt supplied the demands for specimens of pecans, which were effectively used to further the subsequent development work which has since given the Albany pecan district such wide publicity. The seedling nuts produced here were used largely in growing the thousands of nursery trees which were then budded with wood grown on the earlier planted trees of the choice varieties, and again, these budded trees were used to plant other orchards in the neighborhood which will be visited by the delegates to the convention. Many of these seedling trees were sold and shipped to other localities in Georgia and other states.

While all this is important, other vital features of the industry were worked out at DeWitt. The modern orchards, where the gathering, grading and shipping of the nuts will be seen, profit by the results of these earlier operations. Defects in promising

varieties were here detected and in consequence they have not been planted in recent years. Experience in cultivation, fertilization treatment of trees and inter-cropping of land worked out here through years of labor and observation and at no small outlay in cash have been largely available for the benefit of others.

With such a past, the present aspect of this place becomes doubly interesting and the visitor will on this account find the DeWitt orchards and nursery have a distinct and dominant attraction. They are in reality a field for study where days and weeks could be advantageously spent by the student and practical grower. However, this prospective visit will be in the nature of a hurried sight-seeing tour in which a fixed schedule must be adhered to, so no time will be available for detailed observation. Consequently it will be in the nature of a moving picture scene, where stately trees with the dignity of thirty years growth alternate with acres and acres of the earlier successes of top-working, which was here first put into extensive practical operation; then solid blocks of variety after variety of the well known kinds, spreading over hundreds of acres of commercial groves, where the brown beauties are now being gathered and prepared for market.

The scene changes to the nursery, which has all these years been growing pecans, and pecans only, with its stock, ranging from this year's seedlings up to the great masses of budded trees now ready for the approaching planting season, all showing the systematic and clean cultivation so essential at this period of the tree's existence. Then another change. The long rows of nursery stock, the extensive blocks of orchard give place to individual trees of historic interest. The original Georgia Giant tree, despite its susceptibility to scab continues to grow and spread its branches and abide the time when this weakness can be removed, when it will surely resume a commanding position in the list of regular and abundant bearing-varieties. Centennial, Russell and other fine nuts which are not now in popular favor can here be seen under actual orchard conditions.

While such splendid growers as Mobile and Van Deman are familiar to many, it requires trees of a mature age—such as can here be seen—to show their grandeur. Georgia's oldest tree of the Alley variety, which by the way is steadily growing in favor, is on these grounds.

To mention all the things which might be seen would be to write the story of the development of the pecan. It should be written in full some day, and it will make a fascinating book of many pages.

The special significance of this place lies in the fact of its being the scene of the initial commercial operations in the pecan development movement. This was the work of Mr. G. M. Bacon, who is now and has been through all these years at the head of the DeWitt business. His initiative made the start;

his vision of the future gave activity and perseverance to his efforts. Then the same elements were put into the organization of the National Nut Growers Association in the fall of 1901.

Early in 1902, Mr. Herbert C. White, as horticulturist, became a member of the company which bears Mr. Bacon's name, and at once became a prominent factor in the subsequent progress which marked the advent of budded trees. It was during Mr. White's connection with the company that the top-working of seedling trees was done and carried on extensively. It was largely through his agency that the accomplished results obtained here were given publicity through *The Nut-Grower* and other publications, while his contributions of scientific and practical papers to the association at various conventions have been very valuable and have exerted a wide influence.


For a number of years the G. M. Bacon Pecan Co., has not only been prominent, but has been the leading nursery firm in this line. Their annual catalogs have always carried much practical data and timely suggestions, which made it a source of standard information and gave it a wide circulation. During recent years this company has also been solving the problems incident to the successful marketing of the increasing crops. In fact, all the difficulties, trials, problems and obstacles which pioneers encounter have come to them, entailing labor, expense and even disappointments, but the same initiative, perseverance and energy which characterized the start has always been brought to bear in overcoming difficulties and has pointed out the way in which so many are now successfully traveling.

It is no easy task to measure the value of the work performed by Mr. Bacon and the various other laborers in this field or the importance of their achievements. Whether or not they receive due recognition or praise it is certain that "their works do follow them" and succeeding generations will be better fitted to take their true measure.

One of the distinctive characteristics of Mr. Bacon individually is his uniform optimism. This trait necessarily belongs to the pioneer in every line of endeavor, and the early pecan growers were all naturally optimists. While timid or pessimistically inclined people were frightened when rosette appeared in the orchards and nursery he kept evenly on his way or possibly gave better attention to his trees and now he does not regard it as a serious menace. In reference to scab and insect foes his policy is simply to fight and overcome the difficulties as they are encountered.

His vision of ultimate success gave courage to await the results with complacency and confidence. With such a combination of human traits the result now seen at DeWitt materialize to many the vision of the few pioneers and is a tribute to the initiative and labor which produced results far beyond the commercial measure of the undertaking.

THE CONVENTION PROGRAMME

 THE official Program for the Albany Convention, October 27, 28 and 29, covers a variety of subjects and is flexible enough to admit any pertinent topic by way of the question box. As published by the Secretary, the program is as follows. It will be noticed the day for sight-seeing is changed from the second, as originally planned and announced in The Nut Grower, to Friday, the third day of the meeting:

WEDNESDAY, OCTOBER 27TH, 10 A. M.

Call to order.
 Invocation.—Rev. L. J. Ballard.
 Address of Welcome.
 For City of Albany.—Hon. H. A. Tarver, Mayor.
 For Chamber of Commerce.—Mr. Joseph Ehrlich
 Response to Addresses of Welcome.—Col. S. G. Mayfield, Bamberg, S. C.
 President's Address.—Prof. W. N. Hutt.
 The Future of Pecans as Compared to other Standard Fruits.—Prof. H. Harold Hume, Glen St. Mary, Fla.
 Some Lessons in Nut Culture from California.—Prof. A. V. Stubenrauch, Berkeley, Calif.
 Appointment of Committees.
 Announcements by Committee on Local Arrangements.
 General Business.

WEDNESDAY, OCTOBER 27TH, 2:30 P. M.

Relation of Birds to Pecan Insects.—W. L. McAtee, of the Biological Survey, Washington.
 Care and Cultivation of Pecans.—O. P. Mears, Baconton, Ga.
 Establishing a Commercial Pecan Orchard.—F. V. Scott, Elizabeth City, N. C.
 Self Sterility in Varieties of Pecans.—H. P. Stuckey, Georgia Experiment Station.
 Round Table on Orchard Cultivation and Inter-cropping.—Dr. C. A. VanDuzee, Cairo, Ga.

WEDNESDAY, OCTOBER 27TH, 7:30 P. M.

Illustrated Lecture on Top-working the Pecan—Prof. E. J. Kyle, College Station, Texas.
 My Experience in Top-working.—Jas. D. Evans, Florence, S. C.
 Winter Killing of Nut Trees.—S. M. McMurren, Thomasville, Ga.

THURSDAY, OCTOBER 28TH, 9:30 A. M.

The Present Status of the Nut Industry in California.—Prof. R. H. Taylor of the California Experiment Station.
 Bud Variations in Pecans.—G. M. Brown, Van Buren, Ark.

To What Extent can Natural Enemies be Depended upon to Control the Insect Enemies of Nut Trees.—To be discussed by some government specialist.

Best Varieties of Pecans for the Middle Pecan Belt.—D. C. Turnipseed, Union Springs, Ala., and Sam C. Patterson, Milledgeville, Ga.

Round Table on Tree Planting, Use of Dynamite, Distance of Trees, etc., to be conducted by B. W. Stone, Thomasville, Ga.

THURSDAY, OCTOBER 28TH, 2:30 P. M.

My Experience with English Walnuts.—F. T. Ramsey, Austin, Texas.

Conditions Affecting Successful Budding.—J. F. Jones, Lancaster, Pa.

Best Varieties of Pecans for the Gulf Coast.—Chas. E. Pabst, Ocean Springs, Miss.

Round Table on Varieties to be conducted by C. A. Reed, Washington, D. C.

The Use of Nuts as Food.—Miss Edna M. Randall, Athens, Ga.

THURSDAY, OCTOBER 28TH, 7:30 P. M.

Report of Secretary.
 The National Pecan Growers Exchange and its Purpose.—William P. Bullard, Albany, Ga.
 Some Marketing Lessons Nut Growers May Learn from Orange Growers.—Dr. J. H. Ross, Pres. Florida Citrus Exchange, Winter Haven, Fla., to be followed by general discussion of marketing.

Selection of place for next meeting.

Election of Officers.

Report of Committee on Resolutions.

FRIDAY, OCTOBER 29TH

This day will be devoted to sight-seeing. Albany is the center of the largest and most extensive pecan orchards in the world. The citizens of Albany will tender an automobile excursion to the members of the National Nut Growers Association, starting from the New Albany Hotel about 8:30 a. m., trips will be made to the most interesting groves in the Albany section, the ride extending among other places to Hardaway, DeWitt and Baconton, eight, twelve and sixteen miles respectively from Albany.

Pecan orchards extend in every direction from Albany; and owing to the extensive territory so planted it will be impossible to see all these orchards in this one day's drive. But enough will be seen to demonstrate something of the magnitude of this great industry in the Albany district.

About noon a stop will be made at Hardaway, where a barbecue-luncheon will be tendered the Association by Messrs. Patterson and Taylor and associate companies. At this point an opportunity will be afforded nut growers to see the processes of gathering, cleaning, grading, drying and packing pecans for market.

The trip will terminate late in the afternoon at Albany in time to take the evening train for home.

The Nut-Grower

Published monthly by The Nut-Grower Company

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In the United States and Mexico, \$1.00 per year; in Canada and other foreign countries, \$1.12.

No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

3

Copies of the 1915 Badge Book were mailed to members of the Association considerably in advance of the convention date. Others can obtain copies on request of the Secretary. It contains the official program, the names of 275 members, information regarding the convention, and a number of pages of advertising matter.

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The committee on Program has been alive to the importance of using new material and progressive subjects for the Albany convention. Of the 26 names which appear on the program, seventeen are new, while but nine have appeared on previous programs. Six of these are on for reports or as conductors of conferences, so that it reduces the old timers to a small number. However we can confidently expect up-to-date and interesting addresses from Prof. Kyle and "Fruit Tree" Ramsey of Texas and Hume of Florida.

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At the Gulfport convention, when the revised constitution was adopted, the membership in the Association was restricted to individuals, and corporations, companies and firms were thus barred from membership. This change was strongly opposed by a considerable minority on the convention floor. This new order was rigidly enforced and many prominent companies and firms had to be represented by individual names. In the 1915 list of members this constitutional enactment seems to have been overlooked as several company and firm names appear.

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Several years ago the custom of holding conferences on subjects of general interest was introduced as a feature of convention programs. The plan work-

ed well and has been continued to advantage. This year a new name has been given this feature of the practical convention work. It is now "The Round Table."

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It is easy for The Nut-Grower to regard the localities which afford the publication the most generous and regular advertising and subscription support as the banner pecan centers. On this basis Ocean Springs, Miss., Monticello, Fla., and Cairo, Ga., are the banner sections. Viewed from the subscription standpoint, Chicago is far in the lead, while in actual pecan territory, our home town, Waycross, is in the lead at present, with Atlanta a close second.

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The policy we have always followed in soliciting advertising patronage has been and now is to interest only such firms and lines as will be of direct interest and value to the patrons. There must be some touch point with the industry we represent in order to insure desirable results. For suitable lines our medium is, considering the cost, far beyond the results obtained by general publications.

◇ ◇ ◇

Nuts are the natural food of man and when used with cereals, fruits and vegetables, make a safe and well balanced ration. The high cost and diminishing supply of meat is directing attention to the most available substitute for this standard food supply. Nut meat is the logical, convenient and altogether desirable resource. The only difficulty at present is the inadequate supply of nuts.

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October is the month for the chinkapin, the diminutive chestnut which thrives in the lower south. Thus far it is simply a wild product, growing on a dwarf tree or shrub, while the nuts are small and solitary in the burr. They have a sweet flavor and are particularly relished by small boys regardless of age. It is less hardy than the chestnut, which accounts for its restricted area. It is simply a novelty as an edible nut rather than having any commercial importance, but the efforts now being made to select and improve the best varieties may produce interesting if not valuable results.

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The top-working of inferior seedling pecan trees to the best known varieties is a feature of the industry which merits greater attention than it has yet received. It is no easy and entire practicable to convert such trees into wealth producers, or from a human view point make them "a joy forever" that we are forced to the conclusion, that people in general do not yet recognize fully what it means to the owners of inferior trees.

THERE ARE NO CLAY HILLS IN DIXIE

Finer than those in the Cottage Hill, Fla., district where our nursery and groves are located.

Our pecan stock is absolutely great and if you are in the market be sure to let us figure with you.

We are bringing in a large number of the celebrated Brewton (blight proof) pear, and will either quote you stock in any size, or contract to bud for you as many as you like. An orchard of Brewton Pears is a sure and big winner.

We develop pecan tracts under a five year installment agreement the prices and terms of which cannot be beaten.

Also develop combination groves, using either peaches, satsumas or grape fruit as fillers between pecans.

About twenty five acre tracts still available.

WRITE US

THE PENSACOLA SEED
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Cottage Hill, - Florida

KEYSTONE Pecan Orchard Co.

Producers and Exporters of fine
PAPER SHELL PECANS

OFFICES:

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We expect to have approximately five tons of high grade paper shell pecans from our 1915 crop. Varieties: Schley, Van Deman and Stuart. Offers solicited or prices quoted on application.

THE NUT GROWER

How to Grow a Pecan

By BERNIE A. FOHL

Read at the Quincy Convention

We are living in supposedly one of the most highly civilized and enlightened stages in the history of the world, regardless of the war now raging in Europe.

The pecan stands out head and shoulders above any other tree that can be planted in my estimation.

My personal experience dates back fifteen years when I assisted the late and lamented Homer L. Stuart plant pecan nuts in his nursery at Fitzgerald, Ga.

The preparation of the land was very simple and yet thorough. A deep water furrow was thrown out and plenty of black lot manure and some good high grade guano was then put in the furrow. A scooter was then run through this mixing the furrow thoroughly. On top of this was bedded two furrows which was raked off by hand and the seed were dropped four inches apart in the drill. Owing to the lateness of the season and as a precaution against the grass from eating the seedlings up, little pegs were stuck in the ground to indicate where the row was so that we could cultivate the same from week to week and keep the grass subdued before the seedling came up.

With one year's growth several thousand were large enough to graft at the collar with the first season and made trees from three to six feet high with the second year's growth. Thousands of these trees you might say were transplanted and are growing in Fitzgerald, Ga., and vicinity, and have bodies as large as very large telephone poles, thirty-five and forty feet high and where they are planted 10x10 feet apart are now touching each other in the rows. By this experience we learned that no trees on well cultivated land should possibly be planted closer than 50x50 feet.

On land where trees have made this growth, the majority of the

growers grew truck crops and fertilized liberally, and we found that the land could be so used for a period of ten years after fertilizing the tree, after which time, we abandoned all crops except cow peas which we used and turned under as green manure to keep down the grass and weeds and to benefit the trees.

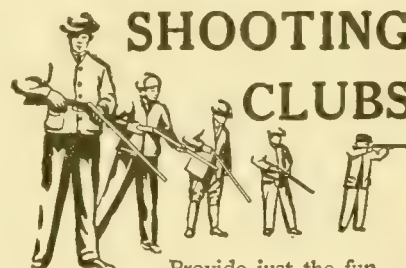
Looking back over the past fifteen years, the outlook and everything connected with the pecan industry, looks brighter and better than anything else that grows in the ground to me, at my age, and if we would all apply ourselves and leave all other trees alone, except the pecan, we would be financially better off and a blessing to future generations that are to follow us.

◇ ◇ ◇

Col. W. R. Stuart.

Since the pecan industry has developed into such wide proportions, it may be of some interest to the

FARMERS SHOOTING CLUBS



Provide just the fun the farmer needs. Be sociable. Invite the neighbors to a trapshoot in the meadow. Find out who is the best shot. Meet once a week in winter—once a month in summer, and soon all will be good shots.

DU PONT

HAND TRAP

throws clay targets 40 to 75 yards just like flying ducks or quail.

Great practice for hunters. Fun for everybody. Let the women try. They ought to know how.

The Hand Trap costs only \$4.00 at your dealers, or sent prepaid by us. Write for free Hand Trap Booklet No. S 564, also "The Sport Alluring" (men) and "Diana of the Traps" (women).

DU PONT POWDER CO.

Established 1802

Wilmington, Del.

reading public to learn a few facts regarding the life history of the founder of this new industry, the late Col. W. R. Stuart. He was a native of the Eastern Shore of Maryland; born November 18, 1820; came to Louisiana when a mere youth, and engaged in sugar planting; losing three successive crops by the overflow of the Mississippi river, he moved to New Orleans and embarked in brokerage, later in the commission business, where he continued to reside until 1871, when he was attracted to the beautiful Mississippi coast. He devoted himself to the upbuilding of southern Mississippi; first by the introduction of Merino sheep among the native flocks which ranged at large over these vast uncultivated tracts of pine lands, receiving no care, except the annual spring drive, to get the clip of wool. He made several shipload importations of Jersey cattle from the islands to the port of New Orleans and held sales at the early Meridian fairs. These were two distinct and permanent contributions to Southern progress and advancement.

Various fruitless efforts were made to find some one paying crop, or fruit culture, that would give one something to live on. He planted extensively of pears, pecans, grapes and oranges of the old

Louisiana sweet variety, but the pecan proved "the survival of the fittest." Selling in New Orleans one of his then choicest varieties of pecans at 50 cents per pound, he became so enthused with the possibilities of these fine nuts, he spent the remainder of his life in the search of finer varieties and the propagation of the same. It was thus in keeping with the broadness and generosity of his soul that of these few rare varieties which he had rescued from oblivion and brought into fame, that by the process of grafting he could scatter them over a vast area of territory that thousands might be enabled to see and taste and enjoy. He was too broad a man to live only for himself. While these efforts were undertaken primarily for himself, for his own benefit, they benefitted his own countrymen, and the state at large, and the same can be said of this new industry of grafting the pecan, which owes its existence to his originality, enthusiasm and energy. Whatever subject he touched he made it glow with the fire of his enthusiasm. He was a man capable of great kindness and the tenderest devotion, full of hope and buoyance of spirit he brightened the pathway of life for many. He had faith in himself and unbounded faith in God and was a joyous and earnest Christian. He died March 29, 1894.—Citrus Fruit Grower.



About the Convention

(Continued from page 134)

teresting program is being arranged, consisting of agricultural displays, farm and business floats, street entertainments, open-air dances at night and numerous novel and entertaining features. There will not be an idle moment during the three days and visitors to the convention will have an opportunity of enjoying themselves while not engaged in the business of the convention.

Reduced railroad rates to the convention are in prospect, pro-

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H. C. White, Putney, Ga.
E. G. Wilson, Waycross, Ga.
M. A. Wilson, Waycross, Ga.

Known bondholders, mortgagees and other security holders, holding 1 per cent or more of the total amount of bonds, mortgages or other securities: None.

J. F. WILSON, Editor.

Sworn to and subscribed before me this 15th day of September, 1915.

J. S. ELKINS,
Notary Public Ware County, Ga.
My commission expires Aug. 11, 1918

Ship your Pecans
in...

Corrugated Boxes



We can furnish them in
any quantity at the follow-
ing prices:



3 lb. size \$2.10 per 100
5 lb. size 2.75 per 100
10 lb. size 3.40 per 100
20 lb. size 4.80 per 100



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We have all the lead-
ing Texas and South-
ern varieties of pecans
Very best of trees.

We grow a full line
of nursery stock and
specialize in Peach,
Plum, Apple, Pecan
and Berries.

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will supplant Elber-
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South is unequalled.

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Other Citrus Trees

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Budded or Grafted
Satsuma Orange, Grape Fruit
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Summit Nurseries, Monticello, Fla.

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Transplanted Pecan Trees

The pecan trees we are offering this season were transplanted one year before budding, and have a much better root system than trees grown in the usual way, having two to six short tap roots in place of one long one, as most trees have.

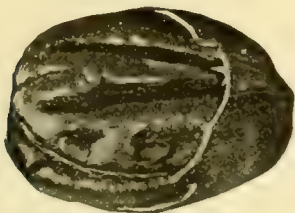
We also grow a full line of citrus trees.

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SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES
OCEAN SPRINGS, MISS.

vided you have a certificate showing you paid full fare in going, and as many as 200 of these certificates are available. Be sure and call for your certificates on starting to Albany.

◇ ◇ ◇

Nuts and Nut Flours

In fresh fruits the protein contents is small. It is increased in dried fruits, and is abundant in those which are crystalized, whilst in oily fruits it is plentiful. Therefore fruit eaters who wish to extract strength from the food they eat should take nut flours in conjunction with fresh fruits, for together they furnish protein in a more wholesome and perfect form than is obtainable from the ordinary mixed inflammatory diet.

◇ ◇ ◇

Roadside Tree-Planting

A unique and distinctive feature of road-building in the Far West (California) is the planting of nut-bearing trees along both sides of the road way, such as pecan and English walnut. They serve a double purpose: bearing fruit and furnishing shade. No state in the union has better public highways than California, and, while they cost money, the cost is a mere quibble when the enormous benefits accrued therefrom are considered. In the matter of trees there is none better suited for roadside planting than our native pecan, for it is a most productive fruit-bearer and is almost unsurpassed as a shade tree.

◇ ◇ ◇

Likes The Nut-Grower

Editor NUT-GROWER:

Inclosed find list of names of folks I am acquainted with. I think most of them might subscribe for a pecan nut journal. I am well pleased with the Nut-Grower and I find it is instructive to any person wanting to learn all about pecans and how to propagate them and take care of them in all details too numerous to mention all at once. The pecan tree is very

Horticulture

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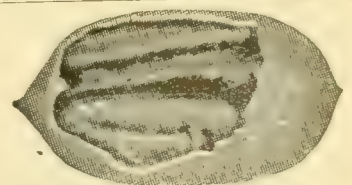
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In a concise booklet **FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

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Grafted Pecan Trees
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Bayview Pecan Nursery
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50,000 Pounds of... Pecans

Is the estimate of
our 1915 crop made
by those who know.

Our crop consists of
finest of the stan-
dard varieties of
pecans.

We are offering these
choice nuts for sale
either in bulk or in
small lots. :: :: ::

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G. M. Bacon
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PECAN TREES

Our Specialty is
growing well root-
ed budded and
grafted trees of
best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

much nicer in every way than the
cottonwood, willow and thorn bush
trees as of yore.

E. D. COOTS

Shreveport, La.



Pecans and Walnuts

It has often occurred to my mind
that if the people of Texas, when
the country was first settled, had
paid attention to pecans and wal-
nuts and the culture of other nuts
that are adapted to this climate,
we would all have been a great deal
better off. Nature indicated in this
goodly land of ours, especially in
Texas, and in all the states along
the coast, that the most valuable
tree adapted to the soil and the
climate; the best adapted to the
needs of the people; the best
adapted to commercialism, the soil
fertility, to temper the winds and
guard against extremes of climate,
the one suggested by nature and
placed here for us, was the pecan.

It can be demonstrated that the
pecan as a whole produces more
upon one acre than ten acres of
cotton bring in commercial value.
It has been demonstrated, over
and over again, that pecans will
produce more to the ten acres than
any other crop that we have adopt-
ed for general farm purposes, and
still we find that pecan trees were
ruthlessly cut down by the pion-
eers for fire wood and other pur-
poses, and now it becomes neces-
sary for us to go back and restore
these very same trees. A most
valuable and benevolent sentiment
was uttered by that valiant pat-
riot, Governor Hogg, when, on the
eve of his dissolution, he wished
that Texas should become a land
of nut trees.

The inspiration of his perceptive
powers impressed him with the
ever prevailing truth that nut
growing was among the most im-
portant of all our natural resour-
ces. Not merely a few trees about
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we needed protective barriers against the rasping winds; shade to break the heated rays; a system of permanent root growth to hold the soil from the eroding flood and to spread carpets of leaves to regulate moisture and temperature.

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The improved varieties of our native black walnut are only second in value compared to the pecan. Each of these trees should find permanent place and should receive special favor near every home.

Nuts are the natural food for man, and the substitution of this natural food for the animal food with its impurities, and for the food that is grown upon depleted soil, will be beneficent and salutatory in result.

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Items of Interest

W. P. Bullard and several other pecan captains are listed in the Badge Book as the Local Committee of Arrangements. Look them up on arrival. If you see anything

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Peach trees 6 cents.

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ROOD Pecan Groves

Pecan Trees and Nuts
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C. M. Rood, Pres. Albany, Ga.

you want, ask them for it. If you want something that you do not see, ask them where it is.

The recent coast storms along the Gulf coast flooded districts planted with orchard and various trees. The action of the salt water proved very injurious to many species but the pecan, hackberry and ash trees withstood the injury which killed willows, camphor and privet.

The California Walnut Growers Association on Sept. 30, announced prices for the present season which are slightly below last season's figures. The prices range from 10.60 for No. 2 to 16.60 for Jumbos and 17c for budded. The size of the crop is estimated at 12,500 tons and is supposed to be ten days late. The packing houses will not open until Oct. 15.

◇ ◇ ◇

New Grading Machine

Mr. Herbert C. White, of Putney, Ga., (formerly of DeWitt, Ga.)

Budded Pecan Trees Our Specialty...

We grow the old standard varieties—Stuart, Frotscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to five years old for sale. Come to see or write

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for planting in the Middle belt or farther North.

Why not plant some of my hardy budded English Walnuts instead of all Pecans, and not put all of your eggs in one basket. My catalogue is free for the asking.

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Why let the old trees go to rack and ruin. Make them produce. Make them pay renewed interest on your past investment. Regenerate those old orchards and make the old trees bear.


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For years past we have shipped more pecan trees than any other nurseryman. At least one third of the pecan acreage in the Albany district is planted with trees grown by us.

Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

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MONTICELLO, FLORIDA

is about to put on the market a simple nut grading machine at a price which will justify the owner of even one bearing tree to use. Mr. White designed this for his personal use to save the trouble, expense and fallibility of hand grading. His budding tool (patented in 1905) which has become so popular, was also designed to save time and inconvenience in his personal work. We do not at present know what the machine is like but we do know that Mr. White would not put on the market any tool unless its usefulness has been fully determined by exhaustive tests.

◇ ◇ ◇

Active Walnut Growing in California

California is extending its acreage in walnuts. The crop for several years has exceeded 20 million pounds annually. In the Puente and Covina section 2,200 acres are just beginning to bear, 800 acres are in young trees, while a large additional acreage is now being planted. When this acreage is in full bearing the Puente Walnut Growers' Association, it is stated, will be obliged to operate the largest walnut packing and cleaning house in the world. Imported walnuts are dutiable at 2 cents per pound not shelled, and 4 cents per pound shelled. Imports of the unshelled totaled 28 million pounds and of the shelled 9 million pounds into the United States during the fiscal year 1914. Their total value was \$4,300,000. Although California has attained a large production of walnuts, importations show no diminution. — Commerce Reports.

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Nut Recipes

PENCHELL

Three cups of brown sugar, one cup of milk. After it has cooked for five minutes put in butter, size of egg. Test in water. When done flavor with vanilla, set aside to cool, then beat until it sugars. Work in a pound of pecan nut

meats and knead well with the hands. Put on plates, smooth and cut into squares.

NUT HASH

Chop cold, boiled potatoes and any other vegetables that are on hand, and put them into a buttered frying pan, heat quickly and thoroughly, salt to taste, then just before taking from the fire, stir in lightly a large spoonful of nut meal for each person to be served. The nut meal is made by grinding nut meats in a food chopper, or rubbing them through a seive, until they make fine meat.

PECAN CAKE

Cream one-half cup of butter with one cup of sugar and two beaten eggs, one teaspoonful of vanilla, one-half cup of milk and one and one-half cups of flour, sift with three level teaspoons of baking powder. Put the batter into two layer cake pans and press halves of pecan nuts over the top of one pan. Bake and put a caramel and nut filling between. Caramel filling: Butter a sauce pan and turn in one-half cup each of granulated and soft sugar and one-third cup of water. Cook until the syrup threads, then cool partially; stir in one-half cup of chopped pecan meats and beat until creamy. Use as a filling between the cakes and put the cakes garnished with the nut meats on top. When a filling made in this way becomes too stiff by beating, a few drops of water added and beaten in will make it soft again.



Books and Catalogs

Harrisons' Nurseries; illustrated trade booklet; 32 pages. J. G. Harrison & Sons, Berlin, Md.

The Moncrief Orchard Service; 12 pages of orchard information.. The Winfield Nurseries, Winfield, Kans.

Badge Book, Program, Etc., of the fourteenth annual convention of the National Nut Growers Association. 52 pages. J. B. Wight, Secretary, Cairo, Ga.

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CRACKS the
SHELL
But NOT the
KERNEL

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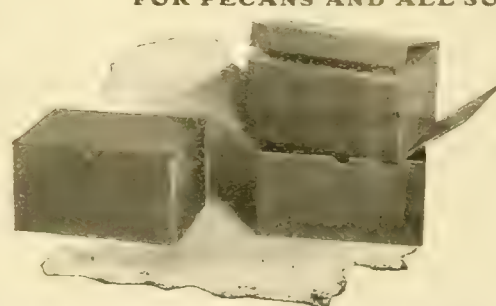
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FOR PECANS AND ALL SORTS OF NUTS



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Write for prices and samples, any size or style you want.

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HIS is simply a safe and sound business movement for utilizing the opportunities for profitable and permanent investment. The plan eliminates the risks, expense and worry of individual ownership of orchards. It is available either for the large or small investor.

Send for a copy of the HAWKEYE HARBINGER. It gives particulars and valuable information.

Hawkeye-St. Paul Company

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Fruitland Nurseries; annual catalog and price list for 1915-1916; 64 finely illustrated pages descriptive of fruit and ornamental stock suitable for the middle and lower south. P. J. Berekmans Co., Augusta, Ga.

Pecans; by H. P. Stuckey. Bulletin No. 116; August, 1915; the Georgia Experiment Station, Experiment, Ga.; Reports record of trees on station grounds with varietal data and other observations.

Louden Barn Plans; a fine illustrated trade catalogue of 112 pages containing plans and much information which will be useful to those who desire modern and efficient farm structures. Price \$1.00. The Louden Machinery Co. Fairfield, Iowa.

A Practical National Marketing Organization and Rural Credit System for the United States; a hearing before the State Department, June 21, 1915. This pamphlet gives the views of Mr. David Lubin, delegate of the United States to the International Institute of Agriculture, Rome.

◇ ◇ ◇

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A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

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CHIPLEY, FLORIDA

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"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

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Incorporated 1903.

The Pioneer Pecan Nursery

The G. M. Bacon Pecan Company

DeWitt, Georgia



Standard Varieties of Well Grown Trees

Our many years of practical experience combined with the scientific study we have made of the industry enables us to supply to the best advantage the wants of our patrons.

Prompt attention to inquiries.
Send For Our New Catalogue.



The G. M. Bacon Pecan Co.

DeWitt, Georgia

The Nut-Grower

Volume XIV

November 1915

Number 11



THE best reward for having wrought well already is to have more to do; and he that has been faithful over a few things must find his account in being made ruler over many things. That is the true and heroical rest which is only worthy of gentlemen and sons of God. As for those who either in this world or in the world to come look for idleness, and hope that God will feed them with pleasant things, I count them cowards and base, even though they call themselves saints and elect.

—CHARLES KINGSLEY.

10c per Copy

\$1.00 per Year

President Pecan--

NONE BETTER

Pecan Growing Made Easy

By planting trees dug with entire tap root and well developed lateral roots. Few nurseries have such trees.

Made Profitable

By planting only genuine budded or grafted trees of best quality and best producing varieties. Some of the biggest, thinnest-shelled nuts don't bear—beware of them.

Griffings' Trees are Models-- Root and Top

Our varieties are best. Gold Medal awarded our pecans at Jamestown Exposition. Handsome pecan catalog free.

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FANCY PAPER SHELL PECANS

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Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

Control of The Sap Flow

BY J. F. JONES

A paper read at the Albany Convention

To graft the more difficult nut tree successfully, under northern conditions, the sap must be active in the stocks. If left undisturbed, or not manipulated, let us say, there is but one "best time" to graft stocks of nut trees. This "best time" to graft is when the sap is just in the right condition to give the best possible results, and, at best, covers a period of only a very few days. Again, not all stocks or seedlings start growth at the same time and, while certain stocks may have reached just the right condition of sap, others, possibly only a few feet away, have not reached this condition. I have practiced, for several years, manipulating stocks to be grafted and holding back the sap to prolong the grafting season. This has consisted simply in repeatedly cutting back the stocks as growth started, cutting off only sufficient wood of the previous seasons growth to remove all buds that might have started to grow.

The stocks are gone over every week or ten days and in this way we have been able to greatly prolong the grafting season so that a much larger number of grafts might be set with limited, expert help. In doing this, we have found that we can not only prolong the grafting season, but that we can get much better stands of grafts or manipulated stocks than it is possible to get on stocks not so manipulated, even though the stocks not manipulated be grafted at the proper time to give the best possible catch or stand of grafts.

According to my experience, there are four essentials to the successful grafting of the English walnut, shagbark and pecan, under northern conditions. We must have good, well matured cions; the cions must be perfectly dormant; we must have good, vigorous stocks and we must control the sap flow

(Continued on page 155)

Quality Trees

Pecans

Satsumas

General line of Hardy Citrus Trees

Every shipment means a satisfied customer

Your patronage will prove it

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Nurseries

W. W. BASSETT, Proprietor

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Budding Tool

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A popular tool for budding Pecans, Hickories, Walnuts, Chestnuts, Persimmons and all other trees.

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THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., NOVEMBER 1915

NUMBER 11

THE FOURTEENTH ANNUAL CONVENTION

 THE fourteenth annual convention of the National Nut Growers Association met at Albany, Ga., the city where the initial meeting was held in the fall of 1901, on Wednesday, October 27, 1915. The formal sessions were held in the Dougherty county Courthouse auditorium, while convenient rooms accommodated the exhibits and committees.

The attendance was large, representative and cosmopolitan. The personnel was in keeping with former meetings and bore the stamp of earnest purpose, supported by experience, science and business acumen. The deliberations were carefully directed by a presiding officer who was quick to turn to good account the most commonplace incidents.

Several of the advertised speakers failed to attend. Some of them sent practical and interesting papers which were read by the Secretary. Every moment was crowded full and nothing foreign to the industry was allowed to kill time.

We speak of the attendance as being large, because about twice as many were in attendance as at former conventions. It should be mentioned also that this doubling up was not due to a large local attendance, as Albany evidently relied upon the efficient committee of arrangements for representation. Mr. W. P. Bullard, Dr. J. W. Gillespie and several others were very busy and then some until the last visitor had departed.

There was no doubt about the gathering being a representative one. The far west, the frozen north, the north Atlantic coast, as well as the balmy south came together for a common purpose and that simple word of five letters, p-e-c-a-n, was the lode-stone that drew this truly cosmopolitan gathering to Albany.

The Albany Herald, which carried full and accurate reports of the convention said:

Many expressions have been heard locally to the effect that never in the history of Albany as a convention city, has there been a more markedly manifest interest in the proceedings of a convention than has been evidenced by the visitors on the occasion of the National Nut Growers' meet. It is made plain that they are here for what they can gain in the way of knowledge, from the experience of others and from scientific re-

search, that will lend to their energies in bringing the important industry of pecan and other nut culture to the stage of development it deserves.

At 10:00 a. m., President W. N. Hutt, of North Carolina, opened the exercises, as indicated by the official program. This was followed by the President's Address, which will be published later in these columns. Mr. Hutt mentioned two important lines which now require attention. Since the experimental stage of production has grown into a practical horticultural business the perfecting of marketing arrangements and the advertising of nuts as a staple article of food become the dominant considerations at this stage of the industry's phenomenal development. Both these subjects had a prominent place on the program.

As occasional transpositions in the published program were expedient, we will not attempt to follow the order in which the papers were presented, but will rather group our comments by subjects. Following this plan, The Use of Nuts as Food, is first to receive attention.

Miss Edna M. Randall, of the Domestic Science Department of the Georgia State Normal School at Athens, read a carefully prepared paper on this subject and later gave a practical demonstration. With a model kitchen equipment installed in the convention hall, she analyzed several recipes, assembled the ingredients in proper and measured portions, mixed them as she talked, cooked them and wound up by serving the finished product to the audience. A large number of ladies were present at this demonstration, but the men were by no means slow in demonstrating their appreciation of the viands when they were ready for sampling. Some of the long, lanky fellows, like Stone of Georgia and Beehtel of Mississippi, showed marked ability in sampling the various dishes, while their long arms served them well. It did not need a vote to demonstrate that the demonstration was a demonstrated success.

Winter Killing of Trees was discussed by Mr. S. M. McMurran, of the Department of Agriculture. Considerable trouble from this cause is said to have developed during the past winter in several prominent pecan centers.

A report of experiments conducted at the Georgia Experiment Station by Prof. H. P. Stucky, on Self-sterility of Varieties, gave original information of much interest and value and opened the way for a general discussion.

The paper by Mr. G. M. Brown, of Van Buren, Ark., on Bud Variation, recorded valuable observations of a careful student.

The subject developed by Mr. O. P. Mears, of Baconton, Ga., in his paper on the Care and Cultivation of Pecans, brought out many and diverse suggestions. Probably more persons got into this discussion than in any other number on the program. This theme, being closely allied to a Round Table subject which followed, brought out several points which will be more closely studied in the future. These points are grouped around several centers, such as the use of lime, legumes and conservation of moisture. It appears that a deficient rainfall reduces the size of the nuts. Legumes and dust mulch are of increasing importance. Deep versus shallow cultivation each had advocates, while a long list of desirable plants for inter-cropping was enumerated and live stock side lines advocated. Bees and birds are also to figure in the equipment of the modern pecan orchard. Mr. C. A. Reed of the Bureau of Plant Industry, lists ample rainfall as the best fertilizer for an orchard.

Birds as a factor in successful pecan orcharding came to the front in connection with the paper of Prof. W. L. McAtee, of the Biological Survey. Even the obnoxious blue jay was given credit for service done in destroying the case-bearer. The blue-bird, although almost exterminated in many localities, destroys the bud worm. The conservation of the birds, it was shown, will greatly help in all orchard work.

The paper on Top-Working Pecans by Mr. J. C. Evans, of Florence, S. C., who has orchard interests in South Georgia, opened up a general and somewhat extended discussion of this subject. While he spoke more particularly on accomplished results rather than the technique of the work, the discussion brought out various erratic views and showed that that highly important feature of the industry needs to be standardized as well as other practical operations. In the particular of cutting back the trees in preparation for top working there seems to be considerable butchery of the trees.

Establishing a Commercial Orchard came in for a fair share of comment, following the reading of a paper on that subject sent in by Mr. F. V. Scott of North Carolina. The use of dynamite in tree planting has become quite general and the advantage of blasted holes extends beyond mere convenience, having an important part in conserving moisture. From the viewpoint of an entomologist, it seems that bugs and insects are not a serious menace to the in-

dustry, as methods for controlling them are proving effective.

Several papers referring to local adaption of varieties were read and discussed and this made room for some optimistic tributes to the pecan which rivalled the much-quoted epigram of that veteran grower, W. C. Jones, of Cairo, Ga., who claims the nut to be the "fruit of the gods." The genial Dr. Ross, of Winterhaven, Fla., scored on Mr. Jones when he assured his audience that among the orange and pecan groves one could "get so close to nature that he could hear the angels sing." Mrs. T. A. Bauning, of Chicago, also joined the class of word-picture painters when she spoke of pecan growing.

Papers by Messrs F. T. Ramsey of Austin, Texas and J. E. Jones of Lancaster, Pa., were read by the secretary.

Mr. C. A. Reed's Round Table Discussion on varieties, as well as his reports at previous conventions are having a marked effect in checking the indiscriminate planting of varieties which do not measure up to a high standard. The list of desirable varieties is being reduced each year by exclusion of those that fail to meet the test and it has now been several years since any new, untried candidates for public favor have been recommended or largely propagated. Schley, Alley, Curtis, Delmas and Success are still in the select list. In the light of experience from longer observation, there are likely to be some of the now unpopular varieties that will "come back." Then the business of marketing nut kernels is likely to bring others to the front. As a preface to Mr. Reed's discussion, he read a paper contributed by a Middle Georgia grower on varieties adapted to that section. The trend of this paper indicated that practically all of the standard varieties are doing well and thus far have escaped serious disease or insect injury.

Mr. Theo. Bechtel, of Ocean Springs, Mississippi stressed the importance of leguminous crops for orchards and, as a part of the plan, the growing of live stock, particularly hogs. In discussing the proper use of lime for improving the production of alfalfa and other legumes, Mr. O. P. Mears, of Baconton, Ga., advocated the use of from one to two tons of ground lime per acre and deep cultivation, claiming that surface pecan roots were not desirable. The well-known volunteer beggar weed, which is prevalent in South Georgia and West Florida received merited mention.

Mr. B. W. Stone, of Thomasville, Ga., persists in advocating the growing of oats as an inter-crop and he has some followers, but an analysis of his case seemed to indicate that Mr. Stone was growing this crop for his Berkshire hogs, rather than for the good of the pecan trees.

As bearing on the self-sterility of varieties, the case of an isolated orchard of 600 Frotschers was

BUD VARIATIONS IN PECANS

By G. M. BROWN

A Paper Read at the Albany Convention of the National Nut Growers' Association



IN 1905 I purchased about 40 acres of creek bottom near the pumping station of the Van Buren Water Co., on Lee's Creek, Ark. On this land there were a few wild pecan trees growing that had been protected by the former owner. The trees had evidently passed through some vicissitudes of fortune as the land passed through the hands of different owners. Some of the trees were clumps of two or three trunks that had grown up as sprouts from stumps where some unfriendly hand had cut them down in former days. Of these five clumps of trees, two showed remarkable variations in the bearing habits of the different sprouts from the same roots. On one the more vigorous sprout was also the best bearer, and I think bore a little the largest nut. At the time I attributed the difference to the fact that the smaller tree stood on the north side and was somewhat overshadowed by its larger companion. Some years ago a windstorm came from an unusual direction and blew down the larger tree. Pecan trees are usually not easily blown down where they grow naturally, but where they grow from the side of a stump they are sometimes peeled off when the wind strikes them from the right direction. After the larger tree was blown down, I expected to see the smaller tree improve somewhat in growth, but there has never been any noticeable improvement in the size or quantity of the nuts it bears. It bears some nuts every year, but it has never been loaded like its companion used to be.

On the second clump the variation in the bearing habits was still more marked in regard to quantity but the nuts appeared to be identical in size and quality. On this clump one tree would bear so heavily that the limbs would bend with the weight of the nuts, while on the other and more vigorous tree there would be only a few scattered ones. About once in six or eight years the poor bearer would have a good crop, and the last time this occurred I cut the tree down to more easily gather the nuts and to get it out of the way of its more profitable companion. This last tree has borne as usual since the other was cut down, and is interesting in that it shows a variation in the bearing habits of the different branches. One or two are surer croppers than the others.

To my mind there is scarcely room for doubt that these differences in the bearing habits were caused by bud variations. When a difference in bearing occurs on trees of the same variety on separate roots, it is usually attributed to a difference in the soil, amount of moisture, etc. But is this always correct? We know that with other fruits and flowers

the horticulturist often seizes upon variations or sprouts to obtain new varieties or improve old ones. Why can't something of this kind be done with the pecan? There are several fine varieties that have many good qualities, but are reported as not bearing as well as others. If these could be improved in bearing qualities if not in size, it would be greatly to the advantage of the industry.

Take for instance the much abused Columbian. He is a tree that in this latitude (35 deg. and 30 min. n.) grows vigorously. It does not start growth too early in the spring, and ripens its wood and also its nuts about as early in the fall as our natives. In fact it conforms to our climates better than any other large Southern variety that I have tested, and could be grown considerably farther north. Its great fault is that it is a shy bearer. It has also been condemned as a poor filler. On my trees I have noticed that the majority of the bad nuts have worms in them. It is reasonable to suppose that the nuts would have been well filled if it were not for the weevils. The tree is only partially top-worked, and there are thin shelled native nuts on the same tree, but the weevils seem to prefer the thicker shelled Columbian.

Now if a Columbian tree, or even a branch could be found that bears better than usual, and buds taken to top work some of the poor bearing ones; these would also be likely to show an occasional variation. By taking the best of these and continuing the process I believe it would be possible to correct the faults of this nut so that growers would have a better opinion of it.

I have not fruited the fine varieties long enough to be sure that the variations that I have noticed are permanent. On one of my Georgia Giant trees there is a branch that for the past two or three years has not grown as well or borne as well as the rest of the tree, but this may be attributed to other causes.

Although this is a negative result I am keeping watch on it with a view of correcting it. In budding some small trees with the Stuart I had one bud that started out remarkably red. Some of the Stuart buds are light pink when they start, but most of them are light yellow. I took some buds from the red tree and budded several small trees, and set them out in my test row. It will be several years, however, before I find out whether it varies in any other way than just in the color of the bud.

As far as my observations have gone, the pecan

(Continued on page 154)

The Nut-Grower

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Forms close on 20th of month preceding date of publication.

Vol. 3

Mr. E. Lee Worsham, Georgia's efficient State Entomologist is authority for the statement that he regards pecan culture as the "finest horticultural proposition in the United States."

◇ ◇ ◇

In some sections the injury to pecan trees by borers has been serious and some times fatal to the trees. Ordinarily the trouble has its beginning with some external injury, and their presence and the damage is not recognized until the trees show the effects. The treatment requires careful inspection and heroic surgical measures, while preventative measures will greatly reduce the injury.

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According to the late Elbert Hubbard, the pecan grower may be classed as a success, whether he realizes a pecuniary profit from his tree or not. The following extract from his virile pen should be an encouragement to many:

"When I speak of success I do not mean it in the sordid sense—the result of a man's work is not the measure of success. To have worked is to have succeeded—we leave the results to time. Life is too short to gather the harvest—we can only sow."

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Albany, according to Mr. W. P. Bullard, chairman of the local arrangement committee has cause for congratulations in having the recent convention within her gates. An extract from a letter in the Albany Herald says:

"It should be very gratifying, not only to the local pecan growers, but to the people of Albany as well, to know that this was the most successful meet in the history of the National Association. In fact it is doubt-

ful if Albany ever entertained a convention of men from all sections of the U. S. covering a period of three days that even approached this one not only in point of attendance but in the sustained interest of the delegates from the beginning to the end."

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The Department of Agriculture has sent out the following circular:

The Department of Agriculture desires to secure information concerning individual nut trees, either native or introduced, which bear nuts of such superior excellence as to justify special consideration.

The nuts which are of special interest at this time are the pecans and other American hickories, black walnuts, butternut, chestnut, and hazels, as well as foreign walnuts, chesnuts, and hazels (filberts). It is also important to locate beechnut, chinquapin, and Japanese walnut trees of especial merit.

To be worthy of the attention of the Department, trees must be hardy in the section where found, vigorous, prolific, and bear annually; nuts of medium size or above; uniform in size and shape; thin-shelled, easily cracked; kernels plump, rich in quality, pleasant and agreeable in flavor, and easily removed from the broken shells in unbroken halves.

If you are the owner of such tree or trees and are willing to cooperate in this inventory of nut trees the undersigned will be glad to send franked packing boxes in which to forward samples of the mature nuts from trees considered worthy of record.

If you know of trees not your own, will you kindly give the name and address of the owner or party from whom a description of the tree and samples of its nuts may be obtained?

We shall greatly appreciate any information you may be able to give regarding the size, character, age and bearing habits of the tree, and especially your opinion of what its points of superiority are.

A franked envelope which requires no postage is enclosed for your reply.

Your cooperation in this work will be greatly appreciated.

Very truly yours,

C. A. REED, Nut Culturist

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Bud Variations in Pecans

(Continued from page 153)

varies in its productive qualities oftener than any other way, and if so this can be turned to advantage in selecting budding wood and propagating trees. The number of variations, however, that would come under the notice of a single observer are comparatively few, and for this reason I would like to get others interested as I believe much could be done along this line.

THERE ARE NO CLAY HILLS IN DIXIE

Finer than those in the Cottage Hill, Fla., district where our nursery and groves are located.

Our pecan stock is absolutely great and if you are in the market be sure to let us figure with you.

We are bringing in a large number of the celebrated Brewton (blight proof) pear, and will either quote you stock in any size, or contract to bud for you as many as you like. An orchard of Brewton Pears is a sure and big winner.

We develop pecan tracts under a five year installment agreement the prices and terms of which cannot be beaten.

Also develop combination groves, using either peaches, satsumas or grape fruit as fillers between pecans.

About twenty five acre tracts still available.

WRITE US

THE PENSACOLA SEED
& NURSERY CO.

Cottage Hill, - Florida

KEYSTONE Pecan Orchard Co.



Producers and Exporters of fine
PAPER SHELL PECANS



OFFICES:

1 Broadway, New York, N.Y.
Times Building, Florence, S.C.
Groves: Baconton, Ga.



VARIETIES:

Schley, Van Deman, Frottscher, Stuart

We expect to have approximately five tons of high grade paper shell pecans from our 1915 crop. Varieties: Schley, Van Deman and Stuart. Offers solicited or prices quoted on application.

THE NUT GROWER

Control of Sap Flow

(Continued from page 150)

in the stocks, if we are to get good, unvarying results.

An excessive flow of sap in the stock may cause any one or all, of the following injuries: Flood and sour the cion or its sap content, and prevent its callousing; by becoming stagnant from being confined, and sour from its starch content, may darken and injure all cut surfaces and thus prevent a union of the stock and cion, or, the excessive bleeding of the stock may, and usually does, exhaust the vitality of the stock to such an extent that it will not be able to callous and form a union with the cion.

In the examination of failures due to the excessive bleeding of the stock, we often find that the cion has calloused perfectly, where good, heavy cion wood was used, while the stock has either failed to callous entirely, or has calloused to slowly to form a union with the cion. To make a union, the stock and cion must callous or start the formation of new wood growth simultaneously, or very nearly so. For instance: If the cion callouses in ten days or two weeks, while the stock must recover from its weakened condition, due to excessive bleeding, and takes a month or six weeks to callous, a very weak or poor union, if any at all, must be the result.

Good, well matured cions of heavy growth, will stand a pretty strong flow of sap without apparent injury and, with this liberal supply of sap, will callous and start growth quickly. At the same time, the stock is being weakened by the extreme flow of sap and consequent waste of vitality, to

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such an extent, that it callouse^s very slowly, if at all, with the result that even with the very best material to work on and careful work, the results from grafting may be very disappointing. In this connection, it is well to remember that the strong, vigorous stocks, which have a large reserve of vitality and which, properly manipulated, would give the very best results, are just the ones that will "bleed to death" when cut off and grafted.

Rood Pecan Groves

Albany, Ga.



Pecan Trees
Pecan Nuts
English Walnuts



Write for
Prices . .



C. M. Rood, President

Mrs. W. R. Stuart
Ocean Springs, Miss.

Pecan Nuts and Trees

The true successor of Col. W. R. Stuart

When writing to advertisers
please mention *The Nut-Grower*.

60,000 Grafted Pecan Trees Wholesale and Retail :: Special Price to Nurserymen

Satsuma Oranges and other Fruit Trees :: Leading Varieties Only
LAFAYETTE PECAN NURSERY, Lafayette, La.

The Fourteenth Annual Convention

(Continued from page 152)

was mentioned where the bearing was not equal to that of trees of the same variety grown in mixed groves.

The Wednesday evening session was by far the most important and interesting. Dr. J. H. Ross, of Winter Haven, Fla., president of the Florida Citrus Exchange, gave detailed, specific and pertinent information regarding the marketing problems which confront the growers in much the same way as they encountered the orange growers. The address was intensely interesting, highly instructive and very suggestive. The necessity for organization was made plain and genuine co-operation was shown to be the ideal and practical way for handling such marketing operations as the citrus growers now have on hand and for that which the pecan growers will soon have to face. The secret of successful operations he tersely summarized in the epigram, "Think for yourself and cooperate with others."

Following this address, Mr. W. P. Bullard, secretary of the recently organized National Pecan Growers' Exchange, outlined its character and purposes as far as complet-

ed. He was followed by Dr. C. A. Van Duzee, who made an appeal for financial support for the organization. He asked for loans from members, on which 6 per cent interest is promised and the revenues of the business pledged as security. The promise was made that an objectionable feature of the charter, which might permit the centralized control of the corporation would be changed as early as practicable. In reply to a question, it was stated that the Exchange would not be ready to handle the present crop.

Officers were elected, resolutions were adopted, the place of next meeting fixed and apparently everything was ready for adjournment when C. A. Reed introduced a resolution changing the name of the organization to the Southern Pecan Growers Association. A lively discussion followed and a fierce parliamentary conflict ensued, which at a late hour was ended by the resolution being tabled. This action was taken when it became apparent that any constitutional change required suitable previous notice. This matter will receive editorial attention in subsequent issues of The Nut Grower.

The convention selected Jacksonville, Fla., as the place of next meeting, and elected officers as follows:

President, W. N. Hutt, Raleigh, N. C.

First Vice-President, B.W. Stone, Thomasville, Ga.

Second Vice-President, Theo. Bechtel, Ocean Springs, Miss.

Secretary, W. P. Bullard, Albany, Ga.

Treasurer, Nathanael Brewer, Jr., Newport, Fla.

The third day of the convention was given over to sight-seeing. Some of the leading features of the nut will make a separate story for our December issue. The exhibits, which attracted much attention, will be dealt with in another article. Practically all the formal papers were reported in successive

N.C. ALSTON
Richland, Ga.

**Standard Varieties
of Pecan Trees**

**Budding Wood
And Nuts**

Pecan Trees

Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
Box 21 Macclenny, Fla.

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

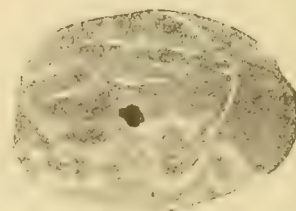
We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

P. J. Berckmans Co.,
FRUITLAND NURSERIES,
AUGUSTA, GEORGIA.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES
OCEAN SPRINGS, MISS.

Transplanted Pecan Trees

The pecan trees we are offering this season were transplanted one year before budding, and have a much better root system than trees grown in the usual way, having two to six short tap roots in place of one long one, as most trees have.

We also grow a full

line of nut trees

Grown by the

**THE JENNINGS
NURSERY**

JENNINGS, OCEAN SPRINGS, MISS.

Budded Pecan Trees Our Specialty...

We grow the old standard varieties—Stuart, Frotscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to five years old for sale. Come to see or write

TUCK BROTHERS
Thomasville : : Georgia

HARDY ENGLISH WALNUT AND PECAN TREES

for planting in the Middle belt or farther North.

Why not plant some of my hardy budded English Walnuts instead of all Pecans, and not put all of your eggs in one basket. My catalogue is free for the asking.

J. F. JONES
The Nut Tree Specialist
LANCASTER, PA.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin Nursery
F. T. Ramsey & Son
AUSTIN, TEX.

Budded Pecan Trees

Best varieties. Write for price list.
Peach trees 6 cents.
Pear trees 8 cents.

Hartwell Nurseries
Hartwell, Georgia

issues of The Nut-Grower. Much data and many notes regarding incidents and persons also await space for suitable comments.

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With Our Advertisers

In our advertising columns this month will be found new advertisements for the following firms:

Summit Nurseries, Monticello, Fla.

Leon Latour, Chicago, Ill.

N. C. Alston, Richland, Ga.

Rood Pecan Groves, Albany, Ga.

W. P. Williams, Blackshear, Ga.

Paper Shell Pecan Nurseries, Lafayette, La.

Southern Pecan & Orchard Co., Chicago, Ill.

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Items of Interest

The 1914-1915 citrus shipping season which closed Oct. 31 shows a total of 46,862 cars, being the second largest total for one year. The lemon crop amounted to 6,851 cars being more than double that of the first two seasons.

A bumper crop of California walnuts is moving readily at the prices fixed by the growers Association. The prediction that the crop would be over 13,000 tons is likely to be fulfilled. In quality the crop is below what it has been in more favored seasons.

Mr. Robert Heller, of Chicago, had a camera at work while the nut growers were in action at the Hardaway barbecue. Several interesting pictures have been received from him.

The convention was a favorable one for The Nut-Grower; new subscriptions were in excess of previous conventions, renewals more numerous and new advertising patronage greater.

Three things are necessary to success with pecan trees: (a) healthy, vigorous trees, (b) good land, (c) proper cultivation and fertilization. If these points are carefully guarded the passing years will bring more and more of satisfaction with the investment. There are insects and fungous enemies to



Now is the Shooter's Time

The call of the woods, the fields and the marshes is not to be denied. Get ready! See that your scatter-gun is oiled and easy. Get shells loaded with

DU PONT

SHOTGUN POWDERS

DuPont :: Ballistite :: Schultze
Du Pont Black Sporting Powder

Each has its good points—each has its friends and all are bound to get desired results if your aim is right.

Write for booklet.

E. I. Du Pont De Nemours & Company
Wilmington, Delaware

Agricultural Lime Ground Limestone Burned Lump Lime Raw Ground Phosphate Rock

Quarries:

Live Oak, Fla.
Luraville, Fla.

Delivered prices made anywhere. Literature and prices cheerfully given on request.

LIVE OAK LIMESTONE COMPANY

SALES OFFICE
Jacksonville, Fla.

The May Nut Cracker



For sale in all parts of the United States and Canada. Write for literature and prices. Ad-
Wharton, Tex.

50,000 Pounds of... Pecans

Is the estimate of
our 1915 crop made
by those who know.

Our crop consists of
finest of the stan-
dard varieties of
pecans.

We are offering these
choice nuts for sale
either in bulk or in
small lots. :: :: ::

For price or other
information, write to

The
G. M. Bacon
Pecan Co.
DeWitt : Georgia

PECAN TREES

Our Specialty is
growing well root-
ed budded and
grafted trees of
best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

watch; but these are not so trou-
blesome as those with which the
peach, apple or orange grower has
to contend. There are hundreds
of growers who witness to the fact
that intelligent care and fore-
thought put into the pecan will
abundantly reward the labor be-
stowed.—J. B. Wight.

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Winter Killing, Sun Scald or Sour Sap of Pecans

BY S. M. McMURRAN.

*An address delivered at the Albany con-
vention of the National Nut Growers'
Association.*

It is not uncommon, in the pe-
can orchards of the south, to ob-
serve here and there and in certain
seasons, occasional trees which
have made a good growth for from
three weeks to three months to
suddenly wilt and die. In the
meantime, it not infrequently oc-
curs that these trees have thrown
up sprouts from the roots or from
just below the ground line, either
before or shortly after they die.

An examination at this time in-
variably shows injury to the bark
between the ground line and the
first limbs and sometimes extend-
ing higher.

This injury if observed early in
the season has a soft, black, watery
appearance and usually a sour
odor.

If examined a few weeks later,
it is generally found to be riddled
with many small holes indicating
that shot-hole or pin-hole borer
has been at work. This latter stage
is the one at which the injury is
usually observed by the orchard-
ist, and has led to a common
though erroneous impression that
the primary damage has been done
by these borers. Entomologists
assure us, however, that this group
of borers rarely attack healthy
trees, but almost invariably at-
tack dead or dying trees. We may
therefore dismiss the apparent
damage done by these insects and
proceed to the consideration of the
cause of the sudden death of these
trees.

The death of plants from ex-
treme temperatures or from sud-
den changes of temperature not

For Sale

FOR SALE. Budded Pecan Trees and
Budwood, standard varieties. 45 acres
pecan orchard, 2 and 3 years old; also
improved farms. C. W. RANSOM,
Houston, Tex.

FOR SALE. Back numbers of THE
NUT-GROWER. Parties desiring to com-
plete their files should send list of what
they need. The Nut-Grower Company,
Waycross, Ga.

FOR SALE.—Fine paper shell pecans.
Varieties: Frostcher, Stuart, Schley
and Van Deman. Prices 25 and 30c per
pound f. o. b. Chas. Munroe, Tallahas-
see, Fla.

**FLINT RIVER PECAN CO. OR-
CHARD FOR SALE.**—Located Albany
Ga., 4 acres, set out 1909. Will sell for
\$250.00 per acre AT ONCE. \$200.00 cash
balance easy payments. Karl Jorgen-
sen, 309½ So. Cedar St., Lansing, Mich.

FOR SALE.—Farm on Illinois Cen-
tral railroad. 100 acres, 26 cleared, 135
budded pecan trees, best varieties, over
100 attained the bearing age. 8 acres in
strawberries; large residence. For par-
ticulars address, A. C. DE MONSABERT,
1216 N. Galvez St., New Orleans, La.

FOR SALE.—Six miles of Albany, Ga.
105 acres of pecan lands. 100 acres, trees
one and two years old; five acres, trees
six years old and bearing. Location, soil
and surroundings unsurpassed; trees
best varieties; Splendid opportunity to
engage in a most promising business;
Price right; One-half cash and terms on
balance. Address ROBT L. STEPHENS
54 West Randolph Street, Chicago, Ill.

Wanted

WANTED.—High grade, thin shell
pecans. Will pay spot cash or sell on a
commission basis. Submit samples with
price on lots of 100 pounds and up. Jas.
E. Plew, 436 Webster Bldg., Chicago, Ill.
11-2

WANTED.—A young man with am-
bition to get into a promising Horticul-
tural business, where pecans and Sat-
suma oranges will be leading features.
No investment of cash necessary. Write
Horticultural Service Co., Waycross,
Ga.

Wanted---to Buy

Fruit of Citrus Trifoliata, the
small three leaved orange used for
hedges. In any quantity from a
peck to a hundred bushels. Write
for prices stating how much you
can supply.

Citrus Fruit Co., Deer Park, Ala.

G. H. Tomlinson
NURSEYMAN
Putney, Ga.

Everything Suited to the South

Horticulture

**A Magazine of Trade News
and Information**

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
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**HORTICULTURE
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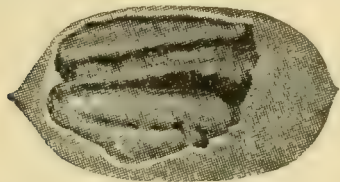
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Boston, Massachusetts

PECAN TREES

Budded Paper
Shells.

BEST VARIETIES
Expert Propagation.
Healthy and
Hardy Stock.

Write for Prices
T. H. PARKER
MOULTRIE, GA.



The Pecan Business

In a concise booklet **FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

B. W. STONE :: Thomasville, Ga.

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

OCEAN SPRINGS, MISSISSIPPI

necessarily extreme has long been observed. Considerable experimental work has been done in an effort to determine just how cold kills plants and an extensive literature, both European and American, has accumulated in the last half century on this subject. The question yet remains to be answered satisfactorily, but for our purposes here, this is not so important as the observed facts that have been well established.

It is very generally understood that trees that enter the winter in a green, sappy, growing condition are much more liable to injury by cold than those that have been so handled that their wood has been well ripened before the first frost.

Furthermore, it has been noted that the injury to the wood of the tree is most commonly found at the collar and at the crotches or forks of the main limbs. It has been shown by investigators that these portions of the tree are the last to stop growing in the fall, which undoubtedly explains why the injury is so generally localized at these points.

The type of injury most commonly found on pecans is on the body of the tree and extends from the ground line up two or three feet. It varies all the way from a slight injury on one side, which is usually indicated by a roughening of the bark, to a complete girdling of the tree. Depending on the degree and extent of the injury, the tree may be simply checked in growth or it may leaf out and make an apparently vigorous and thrifty growth for, from a few weeks to several months, when it suddenly collapses. The writer has observed trees injured in this manner during the past winter to continue their growth up to the middle of August and then suddenly die. This type of injury has never been observed by the writer on orchard trees over six years of age. However, it is of very common occurrence up to that age throughout the territory in which the paper-shell pecan is grown.

THE . . .

Williams Pecan

A new and most promising variety. Tree commenced bearing in 1911 with a crop of 40 nuts averaging 49 to the pound. Subsequent crops have been as follows:

1912—160 nuts, 40 to the pound.

1913—365 nuts, 43 to the pound.

1914—1584 nuts, 36 to the pound.

In a grove this variety has proved more productive than Success, Stuart, VanDeman, Bolton, Pabst, Frotscher, or Jerome; and has been equaled only by Moneymaker.

A paper shell variety that fills well.

While surrounded by other varieties which have shown considerable disease, particularly scab, it has shown only slight susceptibility to these diseases.

Not as susceptible to the case bearer as most other varieties such as Stuart, Frotscher, Nelson and Pabst.

Specimen nuts mailed for 25c.

250 trees for sale at from \$1.50 to \$2.50 each. Buds in season \$2.50 per hundred.

Also Registered Duroc Jersey Pigs for sale.

W. P. WILLIAMS

Blackshear, Ga.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall

Get Our Special Prices

We have other varieties and a stock of 15,000 Satsuma orange trees for sale. Write Us.

**The Paper Shell Pecan
Nursery, Ltd.**

W. M. Ellison, Mgr. LAFAYETTE, LA.



The Eureka Nut Cracker

Crack Nuts The Easy Way
Latest most practical cracker in existence. Kernel is removed whole or in halves. Suitable for all kinds of nuts. Strong and durable. Price 25c Postpaid. Agents Wanted.

Satisfaction Guaranteed or Money Refunded.
Southern Pecan & Orchard Co.
110 So. Dearborn St. CHICAGO, ILL.

Another point to be noted in regard to this trouble is that it is usually spotted throughout the orchard. An occasional tree is killed here and there. This distribution of the trouble on the tree here and there throughout the orchard is a source of much confusion to those inexperienced with this trouble. The only explanation that can be given of this spotting of the injury is that of the individuality of the trees.

Not infrequently, however, nursery stock is killed outright and all the trees in fairly well defined areas are lost.

A great deal of this trouble has shown up during the past spring and summer about this section of Georgia and a consideration of the weather conditions during the season of 1914 gives some light on what appears to have been an epidemic of trouble.

The summer of 1914 was considerably below normal in precipitation up to the first of September. Rains began about this time and between Sept. 1 and Nov. 18, the date of the first killing frost, 10.13 inches of rain fell. Many orchards which showed the effect of the dry weather earlier in the summer put out a late summer or early fall growth and had a thrifty, vigorous appearance and retained their foliage in large part until the first frost.

The week preceeding Nov. 18th was unseasonably warm. Between Nov. 18th and 22nd there were four days on which the temperature fell below freezing, twenty-three degrees F. being the minimum reached on the 21st. The daily range varied from fifteen to thirty-five degrees and the days were clear. With such a combination of growth and weather conditions, it is not surprising that some trees succumbed or that the loss was serious in certain orchards which received late summer cultivation and fertilization, as some did.

It will be obvious to this audience that the most important single

A Wise Man

profits by the experience of others and the experience of many others is that the man who

Plants

pecan trees is getting himself in a state of preparedness against the hardships and failures that come so unexpectedly.

Pecan Trees

planted ten years ago are now yielding their owners very satisfactory returns with the promise of an income no other line of horticulture affords.

A grove planted

This Winter

brings you much nearer this income and independence.

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The Nut-Grower
Waycross, Georgia

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Because we have always delivered trees as ordered, at the time wanted, and packed them so that they arrived in better condition than is usually expected, and the result is that our

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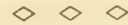
For years past we have shipped more pecan trees than any other nurseryman. At least one third of the pecan acreage in the Albany district is planted with trees grown by us.

Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

Simpson Nursery Company
MONTICELLO, FLORIDA

factor in avoiding this trouble is in so handling the orchard that the trees will be able to thoroughly ripen their wood before the cold weather sets in and that the best way to do this is by planting some gross feeding cover crop, preferably a legume at or a little after mid-summer.

In some places, however, it has been found that even though the orchard was handled most carefully with reference to this particular trouble, injury still occurred. In these cases resort has been had to wrapping the trees from the ground line up about four feet with old sacking and this treatment has, in the cases of which we have record, practically eliminated the trouble.



Philippine Pili Nuts

Some attention is being given by individuals in the Philippines to the larger utilization of the pili nut (pronounced "peelee"). This nut is counted a great delicacy by those who have eaten it. It is native to the islands and is known as *Canarium luzonicum*. It is found in more or less abundance in the Provinces of Camarines, Albay, and Sorsogon. The pili nut has been exported to some extent to Europe and the United States, but no regular exportation is carried on, owing to several obstacles encountered. It has been compared to the pecan nut of the United States, but most persons familiar with both prefer the pili. In Manila it is used extensively on the tables of Americans and foreigners and to some extent by the Filipinos.

Shipments abroad have not been altogether satisfactory because of the unreliability of the local supply. The natives who gather the nut are not careful to let it mature before gathering. As a consequence the mature and the immature nuts are put together and marketed. There is not much difference in the appearance, and it is not easy for the purchaser or the exporter

to detect the immature nut. The nut picked green is subject to a withering or drying up of the meat, which only appears when it is cracked. As a result, those who have exported these unselected nuts have had many complaints of worthless nuts from their patrons.

Practically all the pili-nut trees in the islands are wild. The nut has never been cultivated, so far as known. Some of the nuts have been planted in Manila by private experimenters and have been found to grow well there and to produce nuts at the age of 4 years. It is probable that the pili nut will not become an article of export worthy of consideration until some steps are taken to plant groves of selected nuts, for there are several varieties—some much better than others—and to establish a uniform system of gathering and preparing them for market that shall insure a uniform quality of nut for export. It is estimated by those best informed as to the nature and characteristics of the pili that the nut could be highly developed with but little effort and made to more than rival the pecan in the world's markets.

It is proposed to plant the pili nut tree along the highways of the Provinces in which it flourishes and is known to thrive and to have it planted by the pupils of the public schools in those Provinces. The tree is easily propagated from seed, which is to be had at ten cents per hundred in the pili nut Provinces. The trees are very large when mature, and the best informed persons propose to have them planted at intervals of 30 feet.

—Consular and Trade Reports.



Exports of Brazilian Nuts

Exports of Brazilian nuts from Para, Manaus, and Itacoatiara during the period from January 1 to June 30, 1915, amounted to 407,087 bushels. Of this total, 188,542 bushels were from Manaus, 38,417 bushels from Itacoatiara, and 181,028 bushels from Para. Manaus shipped 100,890 bushels to Europe

SQUIRREL NUTCRACKER

BEST ON EARTH



WOLDERT GROCERY CO.
TYLER, TEXAS AND CHICAGO, ILL.

CRACKS the
SHELL
But NOT the
KERNEL

PRICE
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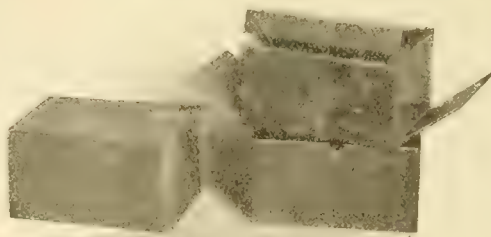
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Chas. E. Pabst

Proprietor
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H. & D. Corrugated Fibreboard Boxes

FOR PECANS AND ALL SORTS OF NUTS



This box will carry safely five pounds of pecans yet it weighs only 14 ounces. Equally convenient for Express and Parcel Post.

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In Postage and Expressage Write for prices and samples, any size or style you want.

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As GOOD as can be grown

And as CHEAP
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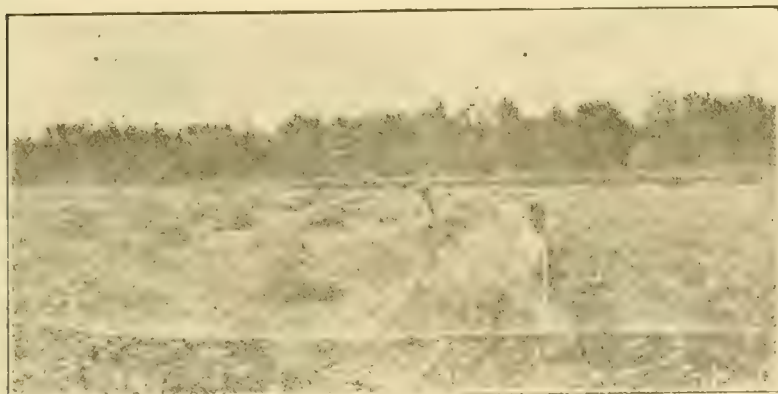
CHIS is simply a safe and sound business movement for utilizing the opportunities for profitable and permanent investment. The plan eliminates the risks, expense and worry of individual ownership of orchards. It is available either for the large or small investor.

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and 87,652 to American ports, Itacoatiara 23,274 to Europe and 13,843 to this side of the Atlantic, and the respective figures for Para were 87,496 and 93,532. The total exportation to Europe was 212,660 and to American ports, 195,027. The United States imported during the fiscal year ended June 30, 1914, 11,431,531 pounds of cream and Brazil nuts, having a value of \$641,825.

◇ ◇ ◇

The Steady Subscriber

How dear to my heart is the steady subscriber, who pays in advance without skipping a year; who takes out his dollars and offers them gladly and casts round the office a halo of cheer. Who never says "Stop it, I can not afford it," or "Getting more papers each day than I read"; but always says "Send it, the ranch outfit likes it—in fact, we regard it as an absolute need." How welcome he is when he steps in the sanctum; how he makes our heart throb, how he makes our eyes dance; we outwardly thank him—we inwardly bless him—the steady subscriber who pays in advance.

◇ ◇ ◇

Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

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Incorporated 1903.

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The G. M. Bacon Pecan Company

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Prompt attention to inquiries.

Send For Our New Catalogue.



The G. M. Bacon Pecan Co.

DeWitt, Georgia

The Nut-Grower

Volume XIV

December 1915

Number 12



QUIT yourself like a man;
speak up and strike out, if
necessary, for whatsoever is true
and manly and lovely and of
good report; never try to be
popular, but only to do your
duty and help others to do
theirs; and, wherever you are
placed, you may leave the tone
of feeling higher than you
found it, and so be doing good
which no living soul can meas-
ure to generations yet unborn.

—THOMAS HUGHES.

10c per Copy

\$1.00 per Year

THE NUT GROWER

Items of Interest

Jacksonville, Fla., is to be the meeting place for the 1916 convention.

A large shipment of Italian nuts designed for the holiday trade at New York was lost by the sinking of the steamship Ancona.

The California Associated Raisin Company is spending \$160,000 in advertising to increase the consumption of this product.

In a Consular report from Marseilles, France, the almond crop is said to be short 55 per cent this season.

Turkeys are coming into favor as an orchard by-product. They are said to rival the famous bob-white in cleaning up insects which injure trees.

Almond growers are finding it necessary to spray their trees on account of the peach blight which has during the past two years seriously injured the almond orchards.

The convention paper by Mr. W. P. Bullard of Albany, Ga., the new secretary of the Association is to be reprinted in leaflet form. Copies can be obtained from the secretary or The Nut-Grower.

December is the month for planting citrus trees. Previous cultivation of the land is desirable and care in planting followed by regular cultivation and ample supplies of plant food are essentials.

Shipping boxes for pecans and nut crackers are two lines of trade which the pecan is building regularly and rapidly. The dealers who advertise in the official organ are getting an increasing trade each year.

No one need go without a practical nut cracker in these days of pecan progress. The Southern Pecan and Orchard Co., of Chicago offer a convenient hand cracker at the low price of fifty cents. This is a move in the direction of helping the industry rather than for profits they might make at this price.

KEYSTONE Pecan Orchard Co.

Producers and Exporters of fine
PAPER SHELL PECANS

OFFICES:

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Groves: Baconton, Ga.

VARIETIES:

Schley, Van Deman, Frotscher, Stuart

We expect to have approximately five tons of high grade paper shell pecans from our 1915 crop. Varieties: Schley, Van Deman and Stuart. Offers solicited or prices quoted on application.

The W. B. Dukes Pecan Farm Moultrie, Georgia

Growers and
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FANCY PAPER SHELL PECANS

One million grafts and buds of Schley Stuart, Delmas and Money-maker. Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

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Quality Trees

Pecans

Satsumas

General line of Hardy Citrus Trees

Every shipment
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customer

Your patronage
will prove it

Write for prices
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A popular tool for budding
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Chestnuts, Persimmons and
all other trees.

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Delmas, Van Deman,
Teche, Russell, Mobile,
Frotscher and Success.

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SHIPPING POINTS: Baconton,
Ga., DeWitt, Ga., Hardaway, Ga.,
Albany, Ga.

THE NUT-GROWER

VOLUME XIV

WAYCROSS, GA., DECEMBER 1915

NUMBER 12

THE NATIONAL PECAN GROWERS' EXCHANGE AND ITS MISSION

By WM. P. BULLARD

A Paper Read at the Albany Convention of the National Nut Growers' Association

LET me apparently digress from my subject a moment to say that every nut grower should subscribe for all the leading nut journals. I am moved to say this for the reason that as Secretary of this Exchange I am in receipt of frequent letters of inquiry that would never have been made if these growers had been readers of these journals. There have appeared from time to time full reports of this Exchange in these journals, whose editors have kindly opened their columns to us so that we might keep the field posted. And any way, every progressive person should take the leading publications pertaining to his work, be that work medicine, merchandising or nut growing. The man who does not take these journals, and who does not attend association meetings of this character because he can not learn anything new is destined to soon land on the dump-pile of antiquated curios. In a certain city there was a firm that prided itself on its past record, which was hoary with age. Across their store front there was a conspicuous sign like this: "Established one hundred years ago. We are it." Some enterprising up-to-date young men set up a similar store across the street and over their door this sign: "Established yesterday. We do not sell any old goods."

The necessity for a satisfactory selling or marketing association for the pecan growers has been discussed for the past three or four years, and at the annual meeting of the Georgia-Florida Pecan Growers' Association, at Thomasville in May, 1914, this thought was crystallized into form by the appointment of a committee to make a complete study of the whole subject. This committee met frequently, investigated market-conditions and otherwise considered the problem, and made a report to the called meeting of the Georgia-Florida Association during the annual meeting of the National Nut Growers Association at Thomasville last October. This report was approved and the committee continued and vested with full authority to do whatever seemed expedient and wise. At the next day's session of the National this whole matter was brought before the

meeting, whereupon the action of the Georgia-Florida was approved and the committee made also the committee of the National and similarly invested with full power and discretion. This action of the National broadened the committee's work and made it national in scope and character.

In due time this National Pecan Growers' Exchange was organized on lines as nearly as possible approximating the California Walnut Growers Association; after which the most urgent thing appeared to the establishment of certain grades and standards. This was done in due season, and two grades, numbers one and two, were established for all the leading varieties of nuts. If this Exchange never does anything more, this one action of grade establishment should earn the everlasting gratitude of nut growers and dealers in pecans.

Briefly stated, this Exchange is based wholly upon co-operative lines. While it has a nominal capital stock to comply with the Georgia incorporation laws, yet this stock has a par value of only one dollar, is non-dividend paying, and only one share to each member; the membership is restricted to pecan growers, and the voting power and control made dependent upon the tonnage of nuts marketed and not upon share holding; in other words, the stock is shorn by charter of every characteristic usually attaching to stock, thus making it in virtue and effect simply membership certificates, and might as well have been so called. As thus organized this Exchange can not be construed as a trust prohibited by the Sherman Anti-Trust Law, but on the contrary, it comes within the Clayton Amendment to said Anti-Trust Law, which expressly extends immunity to labor, agricultural or horticultural organizations instituted for the purposes of mutual help and not conducted for profit.

It would be impossible to organize a selling body more favorable to the grower. The only possible profit that can come to any member is from the sale of his own individual pecans, the voting power is based upon the quantity of pecans sold for each member, one extra vote accorded for each ton of nuts

so sold. Thus both membership and control are placed with the growers and can never pass into the hands of speculators or dealers. While the head office is located in Albany, that being the present logical place in point of thinshell production, yet the board of directors may change this head office at any time to any other city or State.

The Exchange has been criticised because it is not profit sharing with stock that may be bought and controlled and run for the private gain of those in control. They ask how it can be financed. Why, it can be financed the same as any other business, either firm or corporation. Instead of buying capital stock, lend funds to the Exchange secured by its promissory notes or bonds, to be paid back with interest at an agreed date. Such an investment in the Exchange would be just as safe and the security just as good as in any other kind of selling organization.

A profit sharing business is conducted on the basis of greed—for the profit of the owners, who must and will buy just as cheaply as possible. They will hammer the life out of your prices, they will buy cheaply and sell dearly, for there lies their margin of profit. While the private selling concern will depress your prices, the Exchange on the other hand will aim to get you the highest prices possible based upon supply and demand and consistent with good business judgment. Too low a market price means little profits to the grower; too high a price means restricted demand; a fair and consistent market price means market extensions and enlarged consumption. This is what the Exchange will stand for.

And it will stand for high ideals as to standards of grade and quality. This will appeal to buyers. Last year a lot of uncured pecans were shipped to the Atlanta markets. They made people not only sick but disgusted them with pecans and the marketing methods in vogue. Very lately stale pecans were on this Albany market. Spoiled pecans may be found in nearly every market at all times, they being holdovers from the previous year. A large eastern buyer for home use wrote me within a fortnight as follows: "I have great difficulty in buying from the larger grocers of New York and Boston an honest pecan. They seemed to be mixed with the crops of a year or more previously gathered." This Exchange stands for the elimination of these practices.

The California Walnut Growers Association is the most successful association the nearest kin to our business. They will handle about seventy-five per cent of the walnut crop this year. That enables them to guarantee stability of prices throughout the year; and to guarantee standards of grade and quality, including cracking standards; in other words, enables them to guarantee every requisite demanded by the trade. This is what the trade wants, and it will welcome and support any organization that can offer them these things. Eight or nine years ago

wholesalers and jobbers were afraid to buy more than a twenty-four hours' supply of raisins at one time. There was no organization; it was every fellow for himself, and the devil for the hindmost. But now, thanks to the raisin association, these buyers will not hesitate to buy their year's supply at one time.

The California walnut crop this year will approximate 27,000,000 pounds, and their association will handle about seventy-five per cent of it; last year they handled about sixty-five per cent at a total cost to the grower of about three per cent, including advertising, salaries, etc. Can you beat it? That looks like a successful organization. They pay one and one-half per cent brokerage, while the larger pecan companies pay from five to seven per cent. We are patterned as nearly as possible after that association as it is near of kin to our business, and we should adopt all their successful methods as far as applicable to our industry. When you go to Rome do as the Romans do. You might improve on the Roman methods after a while, but better not try too many innovations at first.

The California association sells entirely through brokerage connections, of whom they have over a hundred in the United States. They have more than twenty local affiliating associations located in the producing sections. The local growers are members of the local, and the local has a representation in the councils of the head association. The parent association owns and supplies its own graders to these locals, thus insuring absolute uniformity in grading. Through a well worked out system of bank draft connections, they make immediate payment to the local of ninety per cent of each shipment as soon as shipped, the ten per cent being held back to cover expense of office, advertising, sales and possible loss and to equalize the pools and the sum each shipper gets on each shipper gets on each grade in event there is a carry-over. Under their system favoritism is impossible. These are things we should pattern after.

It will not require large capital to finance this Exchange. There is no reason to begin in a spectacular way; make a moderate beginning and gradually but surely build on a firm foundation and ere long it will dominate the pecan markets of the world. If I were to outline the present requirements, I would advise the raising of a fund of, say \$15,000, payable on call, as deemed wise, said sum to be secured by the bonds or indentures of the Exchange, with an agreed interest and returnable to the lender out of the proceeds of the business. As one large grower puts it, this would simply amount to an advance payment of brokerage commission, which would be returned later with interest. The next step would be to employ the right man, if not continuously, then from time to time, for the first few months, as the needs required. Thus equipped the

Exchange should be started on the highway to success for the pecan growers everywhere.

If I should let loose some enemy that would destroy part of your orchards, you would not spare money to destroy me; if by some means I should cut in two the production of your orchards, you would contribute most liberally to condemn me. And now after raising your crops should you sit idly by and allow your income to be decimated by unorganized market conditions which you could and should rectify? One large grower last year was compelled to buy up ten tons of nuts from time to time on the New York market to hold the price to a profitable basis. Very soon the volume will be too great to do this.


Now that you have raised your crops after long years of toil and waiting, you must not expect some genii to pop up and buy your pecans without effort on your part. You have no Aladdin's lamp to open to you the golden markets. The Spartan youth who complained to his mother that his sword was too short, was told to add a step to it. And now we must add one more step to our many others gone be-

fore, and this must be a combined effort to finance this Exchange. If it is not this Exchange that will dominate, then eventually it will be some monster of greed like the United Fruit Company, or the Standard Oil Company; and if it comes to this then may God help us down here in Southwest Georgia, where we pay nineteen cents for gasoline, while our brothers in Chicago pay only nine. The manipulations of these trusts for their own advantage are wonderful to behold and destructive to experience.

My own connection with the Exchange as Secretary is simply an incident to the organization, and I have neither hope nor expectation of any official connection of emolument whatever; but I am privileged, now and here to say to you that the success of this Exchange is now up to you. It was fathered and brought into being by this very National Association that is now here in session; and organized for you growers. If wise in business wisdom then you will finance it without grudge or stint; if not then it will be every fellow for himself, and the devil get the hindmost; and that will be the most of you.



THE HARDAWAY PACKING PLANT

 THE third day of the Albany Convention was given over entirely to sight seeing so an early start was made in automobiles and many places of interest were visited during the day. No effort will be made to trace the drive or give a report of the day's doings other than the story which centers at Hardaway, the headquarters of the Patterson & Taylor operations. This was the pivotal point for the day for various reasons. The thousands of acres of orchards which surround the town were largely planted shortly before the convention visited the same locality six years previously, and a goodly number of the much larger party for the 1915 inspection had been there on the former occasion. To this contingent of the visitors the wonderful development of the trees and the organized business methods in actual operation in gathering and marketing the nuts was of very great interest.

Then this was the point where the Georgia barbecue was to served at noon. This was one time when everybody was on time. In fact the crowd was so hungry that they began arriving by eleven o'clock, and kept coming until the appointed hour, when something over two hundred brainy and progressive men and scores of sprightly and beautiful women were graciously served by attendants who imparted good will as they dispensed hospitality in the form of Georgia barbecue with finishing touches that would do credit to any chef.

But the meal came to an end before the abundant provisions were exhausted, and the company

was marshalled to a shady lawn where the after dinner speaking was staged. What was there said by representatives of the companies, Prof. Hutt, Senator Butler, Mayor Tarver and others would make another story yet to be written.

However the purpose of this article is simply to give somewhat in detail a description of the initial pecan packing house or factory as it might fittingly be called, where the nuts come in from the orchards and are prepared for market.

This plant is owned by the various parties and interests controlled by the Patterson-Taylor organization, each owner having one share of stock in the plant for each orchard unit they own. It is located on an A. C. L. side track, was designed carefully by Mr. J. A. Miller of Chicago, a civil engineer who is one of the orchard owners and who has been for years a regular subscriber to this journal.

A description of the process from orchard to shipment will describe the plant. Mr. J. M. Patterson, the dominant personality of the enterprise gave personal and courteous attention to the writer in his inspection of plant and process and since other plants will pattern after this initial one to a greater or less extent, a careful memoranda was taken at the time which now takes form in this story.

Beginning in the orchard, large sheets are spread beneath the tree. Nuts are then whipped off clean as the trees are visited but once during the season. The folding of the sheet collects all the nuts which

(Continued on page 171)

The Nut-Grower

Published monthly by The Nut-Grower Company

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No receipts for subscription remittances will be forwarded, unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms closed 20th of month, preceding date of publication.

Vol. 3

The increase in demand for fine pecans is growing faster than the production is being enlarged. Each year they sell more readily and, contrary to expectations, the prices obtained are also increasing, rather than diminishing.

◇ ◇ ◇

The 1916 convention to be held at Jacksonville, Fla., will doubtless attract wide attention, and since that city has the facilities and inclination for entertaining large bodies, it may be confidently expected that the meeting there will not only be a record one in attendance, but enjoyable in various ways.

◇ ◇ ◇

During the past twenty five years the pecan industry has passed through and successfully overcome all the accidents, mistakes and injuries from exploration incident to the formation of a new industry and is now well established and ready to grow more substantially and rapidly than ever.

◇ ◇ ◇

The quality of pecans is a characteristic of the nut that can well be pressed to the front. With all the native and imported nuts which the pecan must compete it can lead them all in this particular, when proper attention is given to the selection of varieties and proper grading when placed on the market.

◇ ◇ ◇

The competition which now exists between the standard varieties of pecans and the seedlings now found in the markets is one of the problems which promises to be overcome to a great extent, by the increasing consumption of the latter by the cracking factories. This leaves the fine varieties for use in

the more circumscribed dessert nut trade, where they have a commanding position.

◇ ◇ ◇

Among the pecan exhibits at Albany the five plates shown by T. S. McManus, of Waldo, Fla., were conspicuous on account of the unusual size and fine appearance of the specimens. We may talk about quality, plump kernels and abundant bearing as being more important, but the fact remains that the size and fine appearance is what attracts the public eye, and it is the general public that is supposed to pay for what it likes.

◇ ◇ ◇

If more of the old and young men could grade up to the measure of usefulness that is indicated by the following extract from a letter to the editor from Mr. Thomas Bridgen, of Alabama, there would be a great increase in the planting of fruit and nut trees. He says: "It may seem like folly to plant pecans in my 82d year but I presume there will be some one left after I am gone, so I am still interested in fruit and nut culture."

◇ ◇ ◇

With the new year we extend greetings to old and new patrons, wishing each and every one prosperity. We know that happiness is in store from the fact that you are or soon will be the proud possessor of bearing pecan trees. In a material way we know of nothing having greater potentialities, as the high brows call it, for manufacturing Christmas good cheer than a bearing pecan tree. These trees live long, so the planter extends his beneficence to future generations as well as the present.

◇ ◇ ◇

About two years ago we told the story of nine Satsuma orange trees which were planted under the direction of the editor near Waycross. As we recall the mention, it said that ten trees had been planted in the spring of 1911 and that one of them failed to grow. The crop from the nine trees in September and October 1913 was 70 dozen oranges which sold on a local market at 20 cents per dozen. As the owner believes in making records of his creditable trees, we are able to add another chapter to the story. The tree that failed to grow the first year was not dead below the bud, and after getting a good foot-hold started into growth and made up for lost time so that the 1914 and 1915 crops are from the ten trees rather than the nine as formerly stated. The past two season's production shows 160 dozen for the past year and an even 100 dozen in 1914. In addition to the increased crop better prices were obtained, even the culls selling as high as 20 cents per dozen while the average price obtained was close to 25 cents.

THERE ARE NO CLAY HILLS IN DIXIE

Finer than those in the Cottage Hill, Fla., district where our nursery and groves are located.

Our pecan stock is absolutely great and if you are in the market be sure to let us figure with you.

We are bringing in a large number of the celebrated Brewton (blight proof) pear, and will either quote you stock in any size, or contract to bud for you as many as you like. An orchard of Brewton Pears is a sure and big winner.

We develop pecan tracts under a five year installment agreement the prices and terms of which cannot be beaten.

Also develop combination groves, using either peaches, satsumas or grape fruit as fillers between pecans.

About twenty five acre tracts still available.

WRITE US

THE PENSACOLA SEED
& NURSERY CO.

Cottage Hill, - Florida

THE . . .

Williams Pecan

A new and most promising variety. Tree commenced bearing in 1911 with a crop of 40 nuts averaging 49 to the pound. Subsequent crops have been as follows:

- 1912—160 nuts, 40 to the pound.
- 1913—365 nuts, 43 to the pound.
- 1914—1584 nuts, 36 to the pound.

In a grove this variety has proved more productive than Success, Stuart, VanDeman, Bolton, Pabst, Frotscher, or Jerome; and has been equaled only by Moneymaker.

A paper shell variety that fills well.

While surrounded by other varieties which have shown considerable disease, particularly scab, it has shown only slight susceptibility to these diseases.

Not as susceptible to the case bearer as most other varieties such as Stuart, Frotscher, Nelson and Pabst.

Specimen nuts mailed for 25c.

250 trees for sale at from \$1.50 to \$2.50 each. Buds in season \$2.50 per hundred.

Also Registered Duroc Jersey Pigs for sale.

W. P. WILLIAMS
Blackshear, Ga.

THE NUT GROWER

Hardaway Packing Plant

(Continued from page 169)

are emptied into a sack, tied and labelled as to variety. This process is repeated from tree to tree until the entire crop is gathered. Early ripening varieties receive the first attention. These labelled sacks then are gathered and hauled to the factory where varieties are separated, as but one variety at a time is processed.

The first step in the factory is to run the contents of the sack through a fanning mill which cleans out the leaves and rubbish collected on the sheet from the whipping of tree. From this mill the nuts, many of which are still in the hull, pass by means of a carrier to the huller where by means of a mechanical appliance the hull is removed. On the way to the grader the hulls are screened from the nuts. The grader is a sheet iron cylinder about ten feet long with a diameter of about thirty inches. This is placed horizontally with enough inclination to move the nuts from the one end to the other as it revolves. This cylinder has numerous perforations, elliptical in shape and varying in size and corresponding with the established grade which has its basis in a specific number of sixteenths of an inch. The entrance end of the cylinder has small perforations and thus separates all the small nuts. Larger ones move along the revolving cylinder by gravity until a perforation large enough for it to drop out is reached. Immediately beneath the cylinder, and corresponding with the varying size of the mesh are compartments with gravity runs which deliver the nuts of each grade in separate baskets.

They are now clean, graded as to size and ready for the dryer. Nuts which pass through the huller without separating the nut pass entirely through and are treated as varying conditions require.

From this stage the different grades as well as varieties are kept carefully separate and are

5,000 Stuart Pecan Trees

6 to 9 Feet Tall

Get Our Special Prices

We have other varieties and a stock of 15,000 Satsuma orange trees for sale. Write Us.

The Paper Shell Pecan
Nursery, Ltd.

W. M. Ellison, Mgr. LAFAYETTE, LA.

Rood Pecan Groves

Albany, Ga.



Pecan Trees
Pecan Nuts
English Walnut
Trees



Write for
Prices . .



C. M. Rood, President

Mrs. W. R. Stuart

Ocean Springs, Miss.

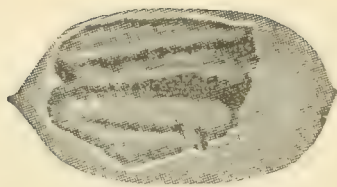
Pecan Nuts and Trees

The true successor of Col. W. R. Stuart



The Eureka Nut Cracker
Crack Nuts The Easy Way
Latest most practical crack-
er in existence. Kernel is re-
moved whole or in halves.
Suitable for all kinds of nuts.
Strong and durable. Price 25c
Postpaid. Agents Wanted.

Satisfaction Guaranteed or Money Refunded.
Northern Pecan & Orchard Co.
Dearborn St. CHICAGO, ILL.



The Pecan Business

In a concise booklet FREE. Every point mentioned from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

B. W. STONE :: Thomasville, Ga.

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery C. FORKERT, Proprietor

OCEAN SPRINGS, MISSISSIPPI

Wanted---to Buy

Fruit of Citrus Trilobata, the small three leaved orange used for hedges. In any quantity from a peck to a hundred bushels. Write for prices stating how much you can supply.

Citrus Fruit Co., Deer Park, Ala.

G. H. Tomlinson N U R S E R Y M A N Putney, Ga.

Everything Suited to the South

Transplanted Pecan Trees

The pecan trees we are offering this season were transplanted one year before budding, and have a much better root system than trees grown in the usual way, having two to six short tap roots in place of one long one, as most trees have.

We also grow a full
line of citrus trees.

Get our price list.

THE JENNINGS NURSERY

JENNINGS :: LOUISIANA

into trays holding probably fifty pounds or more. These trays are about four by six feet in size and four inches deep. As filled they are racked to a height of about five feet on trucks and passed to the drying room where currents of air are circulated by means of a fan. Provision is also made for heating the air to any desired temperature but the constant circulation rather than the temperature is supposed to be preferable. About twelve hours in the drying room cures the nuts. They then go to bins holding specified grades and varieties. The product is now ready for marketing. This company wholesales their supplies through brokers, and offer but three grades for the fancy trade, which they brand on the sack used for handling shipments. The grades are called Extra Fancy, Fancy and Crackers. Any stock that does not classify in the two first named grades goes as Crackers.

Sacks with capacity of 175, 25, 10 and 5 pounds are used, each stenciled as to variety and grade and bearing the name of the company, which handles only its own product. The name of the company is given as the Paper Shell Pecan Growers Association, and membership is limited to the owners or orchards developed by the Patterson Taylor Company. Expenses of operations are pro-rated on the tonnage basis, each paying in proportion to the size of his crop. Membership is optional, but circumstances are not favorable for individual marketing, although some are handling their own crops. The present officers are J. M. Patterson, president; W. H. Wilder, vice-president and Robert S. Corson, secretary and treasurer.

Shipments in pound cartons packed in cases containing 36 cartons are also made to some extent in the marketing program.

This plant, as now in operation, is invoiced at \$6,000 and is handling the crops from about 4,000 acres. It is modeled on co-operative lines and will be enlarged to

N.C. ALSTON

Richland, Ga.

Standard Varieties of Pecan Trees

Budding Wood
And Nuts

Pecan Trees Satsuma Oranges

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubs, and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
Box 21 Macclenny, Fla

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

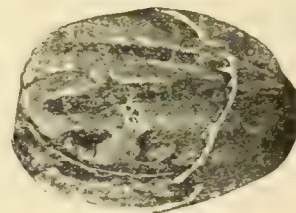
We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

P. J. Berckmans Co.,
FRUITLAND NURSERIES,
AUGUSTA, GEORGIA.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES
OCEAN SPRINGS, MISS.

Budded Pecan Trees Our Specialty...

We grow the old standard varieties—Stuart, Frotscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to five years old for sale. Come to see or write

TUCK BROTHERS
Thomasville : : Georgia

HARDY ENGLISH WALNUT AND PECAN TREES

for planting in the Middle belt or farther North.

Why not plant some of my hardy budded English Walnuts instead of all Pecans, and not put all of your eggs in one basket. My catalogue is free for the asking.

J. F. JONES
The Nut Tree Specialist
LANCASTER, PA.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin Nursery
F. T. Ramsey & Son
AUSTIN, TEX.

Budded Pecan Trees

Best varieties. Write for price list.

Peach trees 6 cents.

Pear trees 8 cents.

Hartwell Nurseries
Hartwell, Georgia

an investment of \$25,000 as crop increase requires. It is, in fact an interlocking interest represented by the several development companies with the orchard investors.

There are many intricate problems, both commercial and horticultural being wrought out in the operations at Hardaway which are not only of much interest, but must necessarily be influential in various ways in the steady growth of the industry. The arrival of nut crops, which, by the way, came in on schedule time, inaugurates a new era in the industry, though much still remains to be done by the trained horticulturists who have heretofore exclusively held the stage.

The visit to Hardaway was an event of extraordinary interest. It will go into history as did the pilgrimage over these same orchards six years ago. Mr. Patterson and his associates fittingly met a great occasion and the appreciation of his guests for the day will long linger in his memory.

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Nut Recipes

NUT BREAD

- 2 1-2 cups flour.
- 2 1-2 teaspoons baking powder.
- 1 teaspoon salt.
- 1 3 cup sugar.
- 2-3 cup milk.
- 1 egg, well beaten.
- 1 cup chopped nut meats.

Sift flour and baking powder; add salt, sugar and nut meats; beat egg well, turn in milk and add to above. Put in bread pan and allow to stand ten minutes. Bake in moderate oven.

NUT-AND-CHEESE ROAST

- 1 cupful grated cheese.
- 1 cupful chopped English walnut meats.
- 1 cupful fine breadcrumbs.

Fine Young Orchards For Sale

Trees now in second year; eight acres; five standard varieties; Splendid location. One-fifth cash, balance in five annual payments. Particulars on request
A. J. Strickland, Blackshear, Ga.

Horticulture

A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$3.00 Per Annum

HORTICULTURE PUBLISHING COMPANY

11 Hamilton Place
Boston, Massachusetts

PECAN TREES

Budded Paper
Shells.

BEST VARIETIES
Expert Propagation.
Healthy and
Hardy Stock.

Write for Prices
T. H. PARKER
MOULTRIE, GA.

PECAN TREES

Our Specialty is
growing wellrooted
budded and
grafted trees of
best varieties.

Careful attention given all orders.
Write for prices.

SOUTHERN NUT TREE NURSERIES

Thomasville, :: Georgia

The May Nut Cracker



The only dependable and successful cracker manufactured. Easy to operate, rapid and lasting. Postpaid anywhere in U. S. on receipt of \$1. Address F. B. MAY, Patenteer, Wharton, Tex.

- 2 tablespoon chopped onion.
- 1 tablespoon butter.
- 1-2 lemon.
- Salt and pepper to taste.
- 3-4 cupful water.
- A few sprigs of parsley.

Cook the onion in the butter with a little parsley until it is tender; add the nut meat, cheese, breadcrumbs; salt and pepper to taste; add the grated rind and the strained juice of half a lemon. Turn into a buttered fireproof dish, cover with buttered breadcrumbs, and bake in oven for twenty minutes. Decorate with cut lemon and parsley.

NUT LOAF No. 1

- 1 cupful chopped nut meats.
- 2 cupfuls breadcrumbs.
- 1-2 cupful melted butter.
- 1 1-2 teaspoons salt.
- 1 egg.
- 1-2 teaspoon onion juice.
- 1 teaspoon mushroom catsup.
- 1-4 teaspoon pepper.

Mix these ingredients together and add more seasoning if required. Put into a buttered tin or mold, bake for one hour in moderate oven (covered the first half hour). During the cooking, baste three times with melted butter. Turn out on a hot dish.

Mock Goose

- 1 pint dry breadcrumbs.
- 6 hardboiled eggs.
- 1 pint chopped or ground nuts.
- 1 pint cold boiled rice.
- 1 tablespoon salt.
- 1 tablespoon grated onion.
- 3 well beaten eggs.
- 1 tablespoon finely powdered sage.

Cook one pint of dry breadcrumbs in a pint of water until boiling hot. Take from fire, add six hardboiled eggs, finely chopped one pint chopped or ground pecan, hickory or black walnut; one pint cold boiled rice, one tablespoonful salt, one tablespoonful grated onion, one tablespoonful finely powdered sage. Mix thoroughly and add three well beaten eggs. Place on oiled paper in a baking pan, form into shape of a goose, roasting

ing some for legs and wings. Form the legs, stick in the body. Form the wings and press them down near the back on the paper. This may be done the day before cooking. One hour before serving time brush the "goose" with melted butter or cotton seed oil, dust thickly with fine breadcrumbs, and bake in quick oven for an hour, basting several times with melted butter or oil. Serve with apple or gooseberry sauce. In serving, cut off the legs and wings and cut the body in slices, crosswise.



Proceedings Mailed

Editor NUT-GROWER:

I have just mailed the Proceedings of the Albany Convention to all life members of the National Nut Growers Association, and to all those who have paid their dues for the year. This is a volume of

When writing to advertisers please mention The Nut-Grower.

For Sale

FOR SALE. Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. C. W. RANSOM, Houston, Tex.

FOR SALE—Fine paper shell pecans. Varieties: Frostcher, Stuart, Schley and Van Deman. Prices 25 and 30c per pound f. o. b. Chas. Munroe, Tallahassee, Fla.

FOR SALE—Farm on Illinois Central railroad. 100 acres, 26 cleared, 135 budded pecan trees, best varieties, over 100 attained the bearing age. 8 acres in strawberries; large residence. For particulars address, A. C. DE MONSABERT, 1216 N. Galvez St., New Orleans, La.

FOR SALE—Six miles of Albany, Ga. 105 acres of pecan lands. 100 acres, trees one and two years old; five acres, trees six years old and bearing. Location, soil and surroundings unsurpassed; trees best varieties; Splendid opportunity to engage in a most promising business; Price right; One-half cash and terms on balance. Address ROBT L. STEPHENS 54 West Randolph Street, Chicago, Ill.

Wanted

WANTED—High grade, thin shell pecans. Will pay spot cash or sell on a commission basis. Submit samples with price on lots of 100 pounds and up. Jas. E. Plew, 436 Webster Bldg., Chicago, Ill.

11-2

15,000 PECAN TREES

In desirable grades and
Standard Varieties. Healthy,
well grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. Lott Co.

Waycross, Georgia

Ocean Springs Pecan Nursery

Season 1915-16

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

Largest Distributor of PECANS in The West LEON LATOUR

Receiver and Distributor of

Louisiana Sugar, Molasses, Rice, Pecans
And Other Southern Products

186 North La Salle Street

CHICAGO, U. S. A.

Liberal Cash Advances Made on Consignments. Write for Particulars

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Julius Weis & Son, New Orleans, La. Leon Godchaux Co. Ltd., New Orleans, La. Lehman, Stern & Co. Ltd., New Orleans, La. Mr. Sol Wexler, President Whitney Central National Bank, New Orleans, La. National Produce Bank, Chicago, Ill. Foreman Bros Banking Co., Chicago, Ill. Wakem & McLaughlin, Inc., Chicago, Ill. North American Provision Co., Chicago, Ill.

Shippers and Growers Are Requested to Furnish Samples

"READ THAT TOP LINE AGAIN"



Fine
Pecan
Trees



And Fine Orchards
Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties. Our system of growing, digging and handling pecan trees insures success. Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries C. M. Griffin & Company
Macclenny, Florida

much practical interest, and no member should miss it. If there are those among your readers who have been members of the Association and have not received the Proceedings, the explanation is likely that they have not paid their dues for the year 1915.

J. B. WIGHT

Cairo, Ga., Dec. 10, 1915.

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Wight's Frotscher Tree

Mr. J. B. Wight advises that his record Frotscher tree, for the year 1915 produced 162 pounds of nuts and has increased its circumference to 74 inches.

This tree has been visited by more people than any other tree in the realm of pecan culture. Its phenomenal history and production has been attributed to the care and skillful attention bestowed upon it by the indulgent owner.

But Mr. Wight is like others in some particulars, and for the past ten years this tree has not in the judgment of The Nut Grower, been given a square deal in its laudable efforts to make history, simply because the owner has not given it room to spread its branches. A fine Centennial tree of equal age stands within about fifty feet of this Frotscher while other trees of various sizes and ages dot the city block on which it stands. It seems that there is but one direction in which it can reach out and the limbs on that side reach out for nearly a hundred feet, while from appearance at least half of the bearing wood is on this open side.

Such a tree deserves an entire acre of space. Thinning out a pecan orchard when the trees begin to crowd each other is very nice in theory but it does not, as far as we have yet heard, go into actual practice.

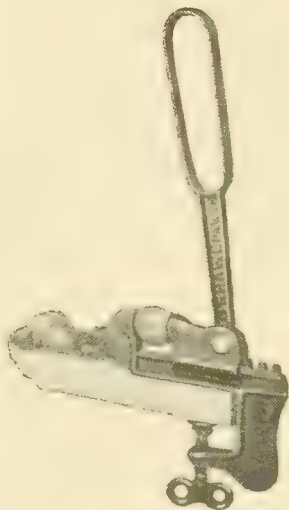
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Planting Instructions

One of our advertisers gives the following instructions for planting pecan trees:

In handling and setting out pecan trees, the most important

"O'SHAW"



**Absolutely THE BEST
Cracker ever invented
for cracking pecans. . . .**

Thoroughly breaks the shell
without crushing the kernel

Made of Malleable Iron and finished in nice shape, with two coats of tin.

Everything drops on the table. No muss all over the floor.

An Ideal Xmas Gift

Sent prepaid to any address upon receipt of 35c stamps not accepted. Address

SHAW MANUFACTURING CO.
1500 West Street
FAIRFIELD, IOWA

thing to remember is, never let the roots of the young trees get dry. Keep them damp always. If the roots are allowed to dry out, serious damage is sure to follow, and the trees very apt to eventually die.

If explosives are not used in preparing the land, dig holes at least two feet, six inches deep, and two feet square. Fill in with top soil only. Plant the tree so it will be at about the same depth as when it stood in the nursery. It is much better and safer to plant

a little too deep, than not deep enough.

Broken or damaged roots should be cut off. Use a sharp knife or pruning shears. Never a hatchet or ax.

Pack the soil very firm around the roots. If it is dry, it is very important to water well, during and after planting. In any event, it is best to use water as it packs the soil better around the roots. Thorough packing is very essential.

Do not put fertilizer in the tree-

hole. After planting work the fertilizer into the soil around the tree, but not too close to it.

Remember, never let the roots get dry.

◇ ◇ ◇

New Nursery Firm

The Inter-State Nurseries is the name of the re-organized firm of Griffing Brothers as applying to the non-citrus operations conducted for many years by this firm at Jacksonville and Macclenny Fla. Mr. C. M. Griffing who was formerly secretary and treasurer of

A Wise Man

profits by the experience of others and the experience of many others is that the man who

Plants

pecan trees is getting himself in a state of preparedness against the hardships and failures that come so unexpectedly.

Pecan Trees

planted ten years ago are now yielding their owners very satisfactory returns with the promise of an income no other line of horticulture affords.

A grove planted

This Winter

brings you much nearer this income and independence.

For information relative to select stock, guaranteed, write to

Summit Nurseries

Monticello, Fla. :: :: :: Foley, Ala.

the Griffing Brothers Company becomes manager of the new firm and will continue the progressive policy which during the past nineteen years developed the extensive and varied operations which he managed.

◇ ◇ ◇

Personal Mention

Mr. J. D. Evans of the Keystone Pecan Orchard Co., which has 60 acres of top worked trees at Bampton, Ga., reported at the convention that their 1914 crop of nuts amounted to 7,700 pounds.

Mr. Guy P. Stubbs, of Louisiana, was one of the prominent figures at the Albany convention. While he did not have much to say in a public way, he was alert as an auditor and evidently absorbed the good things the meeting offered.

The election of W. P. Bullard as Secretary of the National Nut Growers Association makes Albany the headquarters of the organization. Mr. Bullard is well qualified for the position by his ability and prominent activities in organized movements.

There seemed to be something lacking at the Albany Convention in the jovial spirit which characterizes the nut growers' meetings. It was explained when a telegram came from Rev. C. M. Ledbetter conveying regrets that he could not be present.

Dr. J. B. Curtis, of Florida, one of the pioneer pecan men of the south and one of the earliest subscribers to The Nut Grower has for some unexplained cause dropped out of the industry and advises to cancel his subscription. Taking his name off our books makes us feel like we do when advised that a beloved patron is dead.

Mr. C. Forkert, of Ocean Springs, Miss., the pecan hybridizer, appreciates other good things horticultural as well as the pecan. He winds up a recent letter with the following comment on oranges: "The Satsuma orange trees laden with their golden globes are beau-

WHY DO

THE LEADING PLANTERS AND NURSERYMEN
RECOMMEND TREES GROWN BY

SIMPSON NURSERY COMPANY?

Because we have always delivered trees as ordered, at the time wanted, and packed them so that they arrived in better condition than is usually expected, and the result is that our

TREES GROW

or years past we have shipped more pecan trees than any other nurseryman. At least one third of the pecan acreage in the Albany district is planted with trees grown by us. Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

Simpson Nursery Company
MONTICELLO, FLORIDA

tiful to look at just now, but still nicer to eat. I have a few trees of the pineapple orange which seems to be a real early ripening variety, and a good bearer. The tree is a stronger grower than the Satsuma, though on trifoliate; the globes of gold rivaling the Satsumas near by."



Books and Catalogues

The Pecan Business: trade pamphlet by B. W. Stone, Thomasville Ga., 36 illustrated pages.

Report of the Secretary of Agriculture for 1915. 56 pages showing activities of the Department for the past year.

T. H. Parker, Moultrie, Ga. Illustrated price list of select varieties of pecans; four pages. Sent on application.

Blight Resistance among Walnuts; monthly bulletin of the California State Commission of Horticulture, Sacramento; four pages.

The Munson Nurseries, Denison, Texas. Catalogue for 1915-1916; fruits and ornamental stock. Particular attention given to grapes and roses.

Magnolia Nursery, Cairo, Ga., W. C. Jones, proprietor, lists eight popular varieties in a four page price list for season of 1915-1916. Sent on request.

Ravages of the Boll Weevil; A twelve page circular of information. Contains important information. Published by the U. S. Bureau of Census, Washington, D. C.

High Explosives; their Manufacture, Storage, Handling and Use; first section; E. I. du Pont de Nemours & Co., Wilmington, Del. 128 pages of useful information in this line.

Reasoner Bros., Oneco, Fla., are sending out a beautiful catalogue which is of peculiar interest as it lists tropical fruits and plants offered by the farthest south nursery in the United States.

The Pecan; catalogue of the G. M. Bacon Pecan Co., DeWitt, Ga.;

Grafted Pecan Orchard Farms For Sale

Description of Farm No. 1, Located on Carthage Macadam Road, 2 1-2 Miles South of Marshall, Texas.

This farm contains 52 acres, good new four room cottage, two story barn, stable, sheds, two wells of first-class water. Place all fenced and sub-divided; practically all in cultivation.

On this place there is a pecan orchard containing approximately 750 trees, practically all of which are grafted or budded and of the large varieties such as Stuart, Frotscher, Van Deman, and Curtis. These trees range from two to seven years old, possibly 450 of them being six to seven years old, of which about 100 begun bearing the present year, fine large nuts. Also, have about 7500 nursery stock pecan tree, 5,000 of which will be ready for budding next spring.

Also, have about 200 good peach trees, few plum trees and some fine young apple trees, bearing fruit the first time this year. Fine bermuda grass pasture. Price \$150.00 per acre.

Description of Farm No. 2, Located on Rosborough Springs Road, Four Miles South-west of Marshall, Texas.

This farm contains 42 acres, two good wells of water, good four room farm house with new galvanized iron roof, two small barns, good pasture. Place well fenced and sub-divided.

On this farm there are several hundred bearing peach trees. Also, about 450 fine grafted pecan trees, mostly Schley and Stuarts, from two to six years old, 75 bearing this year which yielded a nice lot of nuts which sold as high as 50c per pound. Price \$125.00 per acre.

As an investment, these farms should pay in the next two or three years a handsome dividend on the investment, or as a home, would make you a living without work, except care of the trees and gathering of crop. If you are looking for a new location come to Texas, the greatest State in the Union, and the native home of the pecan tree, there being more native pecans in this state than all of the other states combined. Terms will be at least half cash, balance vendor lien notes, if desired.

M. LOTHROP

Marshall, Texas

60,000 Grafted Pecan Trees

Wholesale and Retail :: Special Price to Nurserymen

Satsuma Oranges and other Fruit Trees :: Leading Varieties Only

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THIS COMPANY HAS AN ATTRACTIVE PECAN PROPOSITION

THIS is simply a safe and sound business movement for utilizing the opportunities for profitable and permanent investment. The plan eliminates the risks, expense and worry of individual ownership of orchards. It is available either for the large or small investor.

Send for a copy of the HAWKEYE HARBINGER. It gives particulars and valuable information.

Hawkeye-St. Paul Company

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16 pages of elegant illustrations with interesting information, and list of select varieties offered. For free distribution among those interested in pecans.

The Pecan; Some Points, Pointers and Suggestions; by J. B. Wight; the Pecan Grove Farm, Nursery and Orchard, Cairo, Ga. Contains a variety of pertinent information. Will be sent on request.

Melaxuma of the Walnut; Bulletin No. 261; a preliminary report by the Agricultural Experiment Station, University of California, Berkeley, Cal.; by Howard S. Fawcett. This bulletin reports investigations for the control of a comparatively new disease of the Persian walnut in that state.

Proceedings of the Fourteenth Annual Convention of the National Nut Growers Association, held at Albany, Ga., Oct. 27-29, 1915; 96 pages, containing stenographic report of this large gathering with list of members and officers. Price 50 cents. Copies can be obtained of the Nut Grower or from W. P. Bullard, Secretary, Albany, Ga.

◇ ◇ ◇

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

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CHIPLEY, FLORIDA

Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 6, Austell Bldg., Atlanta, Ga.—Adv.

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Incorporated 1903.

The Pioneer Pecan Nursery

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DeWitt, Georgia



Standard Varieties of Well Grown Trees

Our many years of practical experience combined with the scientific study we have made of the industry enables us to supply to the best advantage the wants of our patrons.

Prompt attention to inquiries.

Send For Our New Catalogue.



The G. M. Bacon Pecan Co.

DeWitt, Georgia

The Nut-Grower

Volume XV

January 1916

Number 1



IN the life-long fight to be waged by every one single-handed against a host of foes, the last requisite for a good fight the last proof and test of our courage and manfulness, must be loyalty to truth—the most rare and difficult of all human qualities. For such loyalty, as it grows in perfection, asks ever more and more of us, and sets before us a standard of manliness always rising higher and higher.

—THOMAS HUGHES.

10c per Copy

\$1.00 per Year

KEYSTONE Pecan Orchard Co.

Producers and Exporters of fine
PAPER SHELL PECANS

OFFICES:

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Times Building, Florence, S.C.
Groves: Baconton, Ga.

VARIETIES:

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We expect to have approximately five tons of high grade paper shell pecans from our 1915 crop. Varieties: Schley, Van Deman and Stuart. Offers solicited or prices quoted on application.

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FANCY PAPER SHELL PECANS

One million grafts and buds of Schley, Stuart, Delmas and Moneymaker. Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

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W. C. JONES, Proprietor
Successor to Wight & Jones
Cairo, Ga.

THE NUT GROWER

Dynamite a Time and Labor Saver on the Farm

By L. N. HODGE, Oliver, Ga.

The farmers are beginning to see the importance of using explosives on their farms for such work as stump blasting, ditching, tree-planting and blasting sub soil and hardpan.

One or two men with a case of dynamite, some caps and fuse can very quickly and economically remove a number of stumps, don't matter what kind, and they are usually broken up in pieces that are easily handled.

Sometime ago I blasted some cypress stumps for Mr. J. T. Auret, of Kitson, Ga., some of them as large as seven or eight feet across.

Mr. Auret was very much pleased.

Dynamite will dig a ditch where no other method can very well be used. Makes a good ditch and is very fast. Two men could blast more ditch in a day than several can dig.

I blasted some ditch for Mr. Auret which was about four feet deep and five to seven feet wide at top.

Blasted ditches don't cave in or have large banks of dirt on the sides to hold the water back and be washing into the ditch. The blast throws the soil high in the air scattering it some distance on each side. The jar from the dynamite loosens up the pores of the earth so that the water can drain into the ditch. Ditches six feet deep and twenty feet wide can be blasted when the proper methods are used.

No person should plant trees of any kind without blasting the hole. Holes dug with a spade have hard sides for the young roots to penetrate, therefore it cannot get its proper growth, whereas a tree set in blasted holes has shattered soil to commence to grow in. It starts off quickly, getting its roots down into the moisture and plant food. Fruit trees set in blasted

(Continued on page 14)

Quality Trees

Pecans

Satsumas

General line of Hardy Citrus Trees

Every shipment
means a satisfied
customer

Your patronage
will prove it

Write for prices
at once

Florida Nurseries

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Patented 1905

A popular tool for budding
Pecans, Hickories, Walnuts,
Chestnuts, Persimmons and
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Albany, Ga.

THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., JANUARY 1916

NUMBER 1

THE BUILDING OF AN INDUSTRY

BY PROF. W. N. HUTT

President's Address at the Albany Convention of the National Nut Growers' Association

ALL the great institutions and industries of our great country have had small beginnings. The great canning and meat packing industry for which America is known all over the world originated in a small butcher shop. The gigantic Steel Corporation of the United States, which sends out its metal to build the railroads of the world had its origin in a blacksmith shop. The United Fruit Company, or trust (benevolent or otherwise), which by its own merchant marine handles the tropical fruit production of a continent, grew to its present vast proportions from small coasting vessels bartering beads for bananas with half naked savages. And so we might enumerate at length the great productive industries of our country until we arrived at its greatest of all institutions the Federal Government which had its beginning with a few determined farmers behind a rail fence.

Nor is the industry which we here represent today any exception to this rule of small beginnings. Perhaps some might say we are presumptuous to speak of nut growing as an industry. A decade or so ago such a criticism might have been just. Today, however, we speak with assurance for a production that in the past ten years has grown by arithmetical proportion and now amounts in the neighborhood of fifty millions of pounds a year, can with justification be spoken of as an industry.

Nearly half a century ago the pecan industry had its beginning in the finding of a pecan tree which bore larger and finer nuts than had ever been seen before. Nuts from this tree were planted in many places, but no two of the resultant trees produced nuts alike. There was not one of them anything like as good as the nuts from the parent tree and most of them were of very inferior size and quality. The planting of nuts went on for years until the evidence was overpowering that the pecan would not "come true" and no hope was to be looked for in that direction. It was, therefore, very evident that if this variety was to be perpetuated and multiplied it could not be by planting nuts. But fruits of all kinds had been propagated and disseminated, why not the pecan? After many trials, a method of budd-

ing was devised about 1890 by which the pecan could be propagated asexually like other kinds of fruits. This laid the foundation of the pecan nursery business. Soon new varieties began to appear from all parts of the pecan area and nurseries for their propagation to spring up like mushrooms. Every enthusiast who found an attractive seedling in his locality thought it the best nut ever produced, especially if it happened to be of large size. Soon long lists of varieties appeared in nursery catalogues and in nut literature until shortly the hundred mark had been passed. Under the burden of this conglomeration of varieties with its accompanying nomenclature it looked as if the infant industry would be strangled in its swaddling clothes. However, the formation of this Association which became its fostering nurse brought the growing infant safely through this critical period. From this time on orchards were planted year after year from the small home grove to the large company planting of hundreds of acres. A census I made of the commercial pecan area two years ago showed that there were then something over half a million pecan trees set in commercial orchards.

Pecan growing as an industry is scarcely over twenty-five years old. Yet in this comparatively short time it has passed through the formative period, is recovering from the exploitation stage and is now being firmly established on the business basis of nut production. As pecan culture is an attractive business offering great promise for investment, the early days of the industry were characterized by many forms of corporate exploitation that argued ill for the industry and also for the credulous investor.

In order that the pecan industry may achieve its best development, it must divest itself of useless impediments. One of its handicaps is too many varieties and varieties of indifferent merit. True it was only natural in the early days of pecan budding that new varieties should spring up all over the pecan region. Many of these soon dropped out, but it took years to eliminate some of the large sorts which were poor fillers.

At every convention the bringing together of

varieties tends each year to establishing the varieties of merit and the elimination of the unfit. I remember at the former convention in this city our late lamented Prof. Van Deman called attention to the shortcomings of the Nelson variety and pointed out that it must be discarded or it would hamper the proper development of the industry. In like manner we have left behind Georgia Giant, Jewett, Rome and others as milestones to mark the road we have traveled to higher ideals in nut growing. There are other variety milestones we must leave behind us or they will become millstones about the neck of our growing industry.

The pecan is essentially a quality nut and quality must be our watchword in the selection of varieties on which to base the future development of this business. As a high-class dessert nut, the pecan has no equal. We must jealously maintain this high place by discarding all varieties that tend to detract from this high standard. As the seedling pecan will for some years to come be the most dangerous competitor of our cultivated groves it behooves us to make the contrast in size, richness and filling quality between the named variety and the seedling as striking as possible. There is a great advantage also in having the future production of commercial pecan orchards based on a few standard varieties. We want these varieties to be known in the market and as familiar to the consumer as Winesap apples or Elberta peaches. A few varieties and a simplicity of nomenclature will mark years of advance in establishing the pecan industry on a market basis. From the producer's standpoint, we must look for varieties that in addition to quality and full meatedness are heavy producers, with a high resistance to disease. Doubtless the greatest future demand for pecans will be for nut meats, the product of nut packing houses with power crackers. Large fullmeated varieties like Stuart will be ideal for this purpose as thickness of shell will then be of little consequence.

"PAPER-SHELL" PECANS

Right here I wish to register a protest against the incorrect use of the term "paper-shell" in relation to pecans. There is no such thing as a "paper-shell" pecan, there never has been, and in the histological nature of the pecan, there never can be. This incorrect terminology was doubtless borrowed from the almond, but it is an utter misfit as there is nothing in any way papery about the shell of any pecan. Nature knew the kernel of the pecan was too rich to do up in paper. Such an epithet is incorrect, untrue and misleading. The purchaser who buys so-called "paper-shell" nuts and finds them with varying degrees of hardness and thickness feels that he has been taken advantage of and brands the whole pecan business as a fake. The word "thin-shell," however, can aptly and correctly be applied to many varieties of pecans. The term "paper-shell" has been so exten-

sively exploited in the flamboyant and misleading literature of wild-cat pecan promotion companies that the reputable nurseryman and grower would do well to avoid its use. I believe that's a point of considerable importance. We ought to have our names right to prevent misleading people.

BUSINESS METHODS IN NUT GROWING

In the keen competition of to day, business men are giving a great deal of thought to systems and methods of reducing the cost of production. The reduction of overhead and operating expense is the primal factor in making any business successful. Trained men in agriculture and horticulture are now keenly studying the economics of crop production and seeking to add to the profits of agricultural operations by the adoption of the same business methods that have proved successful in the building up of large mercantile and industrial enterprises. The first question they ask is: What does it cost to turn out our finished product? What does it cost to produce a bushel of wheat, a barrel of apples, a crate of peaches, a pound of pork, a pound of pecans? How many producers of these products can answer these questions or even approximate them? Next: What by-products can be marketed to offset the cost of maintenance? In looking for future profits what are you doing each year now toward paying the rent of land and interest on capital invested? These are business questions of special interest to the pecan grower and ones that demand attention if he is to make his orchard a financial success. Every owner or manager of a grove should keep an account with his orchard and debit it with the expenses of maintenance and credit it with what it turns out in the way of nuts and by-products. I have for years made use of every opportunity to visit pecan orchards to study the conditions under which the trees are being grown and to note what is being produced annually to offset the cost of maintenance. It has been my general observation that overflow lands, while usually low in first cost and high in fertility, do not, as a rule, give as good horticultural and financial returns as the cultivated orchards on poorer agricultural lands. No matter how fertile the soil, the best growth in trees is not to be obtained without cultivation. Trees planted in pecan orchards at the wide distances of fifty to eighty feet to provide for future growth, necessarily give a large proportion of unoccupied land during the early growing period. Since cultivation is imperative, it is an important question of orchard economics how to produce the greatest revenues from these middles and at the same time obtain the optimum development of the grove trees. Experience has shown that this can best be done by judicious combinations of leguminous cover crops, cultivated crops and live stock. In discussing this important question let us at once rule out grass crops and small grains, which almost invariably interfere with the best develop-

ment of a grove. In the wide middles of young pecan orchards truck crops such as melons, cantaloupes, sweet and Irish potatoes, snaps, English peas, etc., are capable of giving a good if not a high profit from the land. At the same time the intensive tillage and high fertilization necessary for the truck crops insures a maximum growth to the trees. It should always be planned to have summer crops followed by clover, vetch or other winter legumes. These hold the soil from washing and add fertility between seasons. Field crops such as cotton, peanuts, cowpeas, soy beans, etc., if properly handled can be made revenue-producers and at the same time keep the trees in favorable growing condition. The corn plant is too tall a grower and too rank a feeder to be used in pecan orchards except by a very careful man. If corn is allowed to grow close to young pecan trees, it will certainly dwarf and injure their development. Each year as the trees increase in size, the space for the inter crop should be restricted until the trees are taking all the land. At that time the trees will be paying the rent and expenses of maintenance. In combination with cover and cultivated crops in pecan orchards, there is no better money-maker than the hog. The pecan grower who is not using hogs in his orchards is neglecting a valuable means of reducing expenses of maintenance.

In suitable sections low-growing, early maturing types of fruit trees, like the peach and the Satsuma orange, make excellent fillers for pecan orchards. From a section of an eight-year-old experimental pecan orchard, interplanted with peach trees, we have harvested five paying crops of peaches and the pecan trees have made as good growth and been as productive as other sections in leguminous crops and pastured with hogs. With our wide variety of crops in the South almost endless combinations and rotations can be worked out for profitable use in growing pecan orchards. Whatever crops are used, the land should be handled intensively until the trees are able to use it in the same manner. By these intensive methods it is possible to bring a grove to successful bearing and at the same time have the inter crops go a long way toward paying the overhead expenses and cost of maintenance.

THE WASTAGE OF THE PECAN INDUSTRY

If all our aspirations were achieved and all our hopes realized, we would know that the millenium had surely come. If every tree we planted grew to maturity, the world would soon be waving forests of verdure. There would then be little need of plant propagators. But, strange to say, the nurserymen do business year after year. They propagate their trees by the tens and hundreds of thousands and do it over again each season and yet the world is not full of trees. Why? Because of the enormous wastage.

Wastage from drying out in transit.

Wastage from careless handling before setting.

Wastage from improperly dug holes.

Wastage from improper transplanting.

Wastage from lack of cultivation.

Wastage from insect ravages.

Wastage from unsuitable soils.

Wastage from being plowed over by careless men.

Wastage from over-cropping.

Wastage from drouth, disease, stock and scores of other forms of accident and neglect.

After years of careful observation in horticulture, I am led to believe that scarcely twenty-five per cent of the apple and peach trees that leave the nurseries ever come to profitable bearing, and of pecans scarcely ten per cent. Look around in your own experience and see if my estimate is not correct. Can the pecan industry stand this enormous wastage and survive? It can, and must, for the law of the survival of the fittest holds good in business as well as throughout all nature. It is not the elimination of the unfit tree for pecan nurseries though improved methods of culture and propagation now produce the best of trees, but it is the elimination of the unfit man, the hasty planter, the unsophisticated investor, the unprincipled promoter, the careless cultivator, the non-resident owner. The industry will rid herself of these barnacles and sail on to sure success on the efforts of the man who does not plant orchards to sell but plants trees on his own land, looks after their planting and care and grows them to produce nuts to send to market. It is the resident landowner and planter of the South on which the great pecan industry of the future is to be built. The industry has almost passed through the promotion and exploitation stage and is now getting down to a safe, practical basis for development.

Experience with other classes of fruits has shown that the very large orchard is by no means as successful as the small orchard. If the extremely large planting ever comes to bearing at all it never anywhere approaches the per acre production of the small grove. The reason for this is simply that in very large groves each tree does not get individual attention. They do not know their master's voice like the trees of a small grove do. If it takes one man and two mules to tend five acres of grove, it will take one hundred men and two hundred mules to tend five hundred acres. But whoever saw a five hundred acre grove getting that much care and who ever saw the hundreds-of-acre grove producing anything like the nuts that the five, ten and twenty acre grove does? It is to be hoped the industry will come safely through the bigness stage where the too big planting and the too big variety take precedence of all other considerations.

(Continued next month)

The Nut-Grower

Published monthly by The Nut-Grower Company

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In the United States and Mexico, \$1.00 per year; in Canada and other foreign countries, \$1.12.

No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

UNION GUARDIAN 3

The American Fruit Grower is a recent addition to our exchange list. It is published monthly at Charlottesville, Va.

◇ ◇ ◇

Local nut cracking establishments are the next important step to be taken in the southeast, and is being made possible by the increasing pecan production.

◇ ◇ ◇

One of the rewards the editor receives is through the indirect way in which subscribers manifest their appreciation of the publication by doubling up when making remittances—paying two and sometimes three years in advance. Another way they please him is by telling others about The Nut-Grower and thus causing additions to our subscription list.

◇ ◇ ◇

It is about time for some one to get busy along the line of filbert growing. There are several varieties which nurserymen claim will do well in all parts of the country. They thrive best in a light, rich soil and like plenty of moisture. The trees are trained to a single stem and suckers carefully removed. Kentish Cob, Lombard, English Purple and American are leading varieties.

◇ ◇ ◇

The California walnut growers are doing some important work in disposing of culls which is suggestive for the pecan producers. These culls are cracked, kernels graded and sold locally as far as practicable. Broken kernels are ground and enter into combination with meats, fruits, preserves and canned products. The future is sure to make extensive use of nut kernels in various ways, as these experiments forecast.

Every great movement has its slogan and in many cases it is the slogan that gets the business. These slogans are suggestive, educational or humorous as best fits their intended use. Anyone who has followed the systematic efforts to increase the consumption of apples get pointers from the following which appears in a fruit journal:

"Eat apples every day
Keep the doctor away."

We mention this for the purpose of inventing or discovering a suitable pecan slogan, one which will educate to an appreciation of the food value of the nut and incidentally advertise it so that consumption of the crops will keep pace with enlarging production. Possibly some of the associations will offer a prize for one suited to their use. In the meantime The Nut-Grower will receive entries for such a contest.

◇ ◇ ◇

Pedigree pecan trees have been given mention in several previous issues. It is none too soon for enterprising orchard owners to locate and record the performances of his most productive trees of all the standard varieties. With a blue ribbon record the budding and grafting wood that can be sold from such trees will be more profitable than the nuts, if the wood is sold at the advance prices which the records warrant. The Nut-Grower is starting a register book in which strains of varieties can be listed with a view to assembling the data and performance records, which when tabulated and utilized promise to a substantial increase in the tree yields.

◇ ◇ ◇

As another growing season is near, the matter of systematic records of orchards and of individual trees deserves attention, and plans for regular observations are now in order. Ever since the establishment of The Nut-Grower in 1902 and the formation of the National Nut Growers Association we have urged concerted action and encouraged individual efforts in this line. At the St. Louis convention in 1904 a special committee reported a plan for the establishment of trial grounds in different sections of the country and outlined a supposed feasible method for financing the initial operations. It contemplated co-operation with land owners in a way that would give the association a substantial interest in the commercial orchards in view. That was eleven years ago and many orchards planted since then are now bearing profitable crops. The report of this committee was adopted, but that was as far as the action went. We known now that an up-to-date orchard of this age, in which the association might have an interest, would be doubly valuable, as the revenues would provide for the experimental work which is needed now while many avenues for research await attention. However, we are growing up to a better appreciation of some things, and other plans for accomplishing results are coming into view.

THERE ARE NO CLAY HILLS IN DIXIE

Finer than those in the Cottage Hill, Fla., district where our nursery and groves are located.

Our pecan stock is absolutely great and if you are in the market be sure to let us figure with you.

We are bringing in a large number of the celebrated Brewton (blight proof) pear, and will either quote you stock in any size, or contract to bud for you as many as you like. An orchard of Brewton Pears is a sure and big winner.

We develop pecan tracts under a five year installment agreement the prices and terms of which cannot be beaten.

Also develop combination groves, using either peaches, satsumas or grape fruit as fillers between pecans.

About twenty five acre tracts still available.

WRITE US

THE PENSACOLA SEED
& NURSERY CO.

Cottage Hill, - Florida

If you want Authentic Information as to Nut Culture you should read

The Nut-Grower

Published monthly at

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THE NUT-GROWER is the official organ of the National Nut Growers' Association and is the medium through which the most reliable and detailed information is given to the public. The practical grower and the amateur, the orchardist and the nurseryman can each glean valuable data from its pages.

\$1.00 the year. You are invited to become a regular subscriber

THE NUT-GROWER CO.
Waycross, Georgia

Pecans---Their Food Value

The importance and growing popularity of the pecan as an article of food is strongly emphasized by Dr. J.H. Kellogg, of the Battle Creek Sanatorium, who is one of the country's most generally recognized authorities on such subjects. The information he furnishes will be of interest and encouragement to the growers in the world's recognized greatest pecan area of which Albany is the center.

The letter from Dr. Kellogg, of recent date, was addressed to W. P. Bullard, of this city, who is secretary of the National Nut Growers' Association and of the National Pecan Growers' Exchange. It was read Wednesday night at the annual meeting and banquet of the Albany Chamber of Commerce by Mr. Bullard, during the course of an address he made before the meeting on the Pecan Industry and its possibilities, its growing permanency, etc. In part Dr. Kellogg says:

"I regard the pecan as one of the very finest of nature's choice products. A pound of pecans contains more nourishment than any other known food. A pound of pecans contains as much protein as half a pound of meat as much fat as three-fourths of a pound of butter and as much starch or carbohydrates as one-fourth of a pound of bread, so a pound of pecans is the full equivalent of a pound and a half of other highly concentrated and highly nourishing food. In comparing total values, a pound of pecans is worth, in nutritive value, two pounds of pork chops, three pounds of salmon, two and a half pounds of turkey or five pounds of veal.

"An acre of land planted to pecans will produce from four to ten times as much nourishment as one used for pasture. In the next century nuts will largely, if not entirely, take the place of meats on the bill of fare and the pecan will assume its rightful place at the head of the list of nourishing and digestible foodstuffs."—Albany, Ga. Herald, December 18, 1915.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall

Get Our Special Prices

We have other varieties and a stock of 15,000 Satsuma orange trees for sale. Write Us.

The Paper Shell Pecan Nursery, Ltd.

W. M. Ellison, Mgr. LAFAYETTE, LA.

Rood Pecan Groves

Albany, Ga.



Pecan Trees
Pecan Nuts
English Walnut
Trees



Write for
Prices . .



C. M. Rood, President

Mrs. W. R. Stuart
Ocean Springs, Miss.

Pecan Nuts and Trees

The true successor of Col. W. R. Stuart

Fine Young Orchards
For Sale

Trees now in second year; eight acres, five standard varieties. Splendid location. One-fifth cash, balance in five annual payments. Particulars on request.

A. J. Strickland, Blackshear, Ga.

My Experience with English Walnuts

F. T. RAMSEY

I can remember back nearly forty years when my father begun buying seedling trees and planting them, and a little later bought and planted nuts of unknown varieties. They were probably from Europe. Not one of these trees lived to be over three or four years old and three or four feet high. Sometimes their death seemed caused by drouth and sometimes from freezing.

Later other seedlings from nuts grown in California lived nearly twice as long and got about twice the height, but not one ever bore. Then we commenced getting buds and grafted trees of all the varieties to be found in the California catalogs, and budded and grafted on our native walnuts, both the the Black and Rupestris and on the stocks that seem to be classes between the two. I have found that Franquette has to be four or more years old before it produces any pollen (catkins). Of the California varieties Bijou is the strongest grower and is in perfect health. Not a twig has ever been caught by a late frost. Prepaturiens and Santa Rosa bore the first walnuts at five years old. I am budding Mehlman among the others. It is claimed it is a good pollenizer and bears young itself.

Most of the California varieties will occasionally get the soft wood frozen back some. The Rush and the Hall, especially the latter have set fruit on a two year bud and have not been touched by frost. The Bismarck is an enormous grower. The Pomeroy, or wood from the best tree, seems a trifle harder to make live in budding.

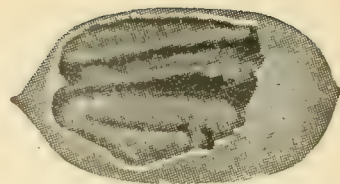
I feel I have evidence sufficiently positive to justify me in saying that the walnut orchards of the South, or perhaps of any place east of the Rocky Mountains, will be some of the varieties of the seedlings that are bearing in western Pennsylvania and New York, and

THE NUT GROWER

scattered southward to the South Atlantic. From good authority I learn there is a twelve year old seedling tree on the Atlantic side that has borne six crops of nuts.

Austin is perhaps at the extreme eastern edge of the range where is found the little walnut (a half inch in diameter) listed in Texas as *Juglans Rupestris*. And here it blends or crosses with the native black until one may find trees bearing nuts of any size on up to the black. Some of these larger trees look and bear nuts like the walnuts of California. If one follows these *Rupestris* westward in Arizona, he will find them called *Juglans Arizonica*, larger than our true *Rupestris*, but the change has been so gradual that one cannot draw a definite line, and I do not believe one can draw a line between them and the medium sized nuts of California (*Californicum*) but the California tree can hardly, if at all, be kept alive at Austin, on same soil and under same treatment under which our natives of all strains grow luxuriantly.

Burbank's Paradox I believe contains some blood of one of the natives of California. While it grows off freely in the spring, by midsummer it looks like would die. When I visited Mr. Burbank he showed me growing on the street in front of his home some of his Royal, a black or cross between a California native and an eastern black, and as he said, the twelve year old trees were twice as large as a row of pure black or pure California growing nearby 18 years old. It looked like a profitable timber tree. I got grafts from them and also grew seedlings from some of the nuts and at 8 years of age the best of them is just half the size or weight of the pure native black growing nearby. To some extent it indicates that a walnut like a pecan does not want to be taken from the west to the east, or I should say from a dryer atmosphere to one more humid. A pecan that is subject to scab in the east is entirely free from it



The Pecan Business

In a concise booklet **FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Nuts and trees for sale.

B. W. STONE :: Thomasville, Ga.

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

OCEAN SPRINGS, MISSISSIPPI

Wanted---to Buy

Fruit of Citrus Trifoliata, the small three leaved orange used for hedges. In any quantity from a peck to a hundred bushels. Write for prices stating how much you can supply.

Citrus Fruit Co., Deer Park, Ala.

G. H. Tomlinson N U R S E R Y M A N

Putney, Ga.

Everything Suited to the South

Transplanted Pecan Trees

The pecan trees we are offering this season were transplanted one year before budding, and have a much better root system than trees grown in the usual way, having two to six short tap roots in place of one long one, as most trees have.

We also grow a full
line of citrus trees.
Get our price list.

THE JENNINGS NURSERY

JENNINGS :: LOUISIANA

N.C. ALSTON

Richland, Ga.

Standard Varieties of Pecan Trees

Budding Wood
And Nuts

Pecan Trees Satsuma Oranges —AND— Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
Box 21. Macclenny, Fla

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

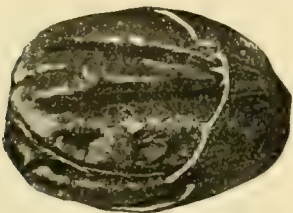
We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in carload lots.

Catalogue for the asking.

P. J. Berckmans Co.,
FRUITLAND NURSERIES,
AUGUSTA, GEORGIA.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

SUCCESS



NATURAL SIZE

The nut that has never failed to bear and never failed to fill at both end with kernels of best quality.

BECHTEL PECAN NURSERIES
OCEAN SPRINGS, MISS.

when taken to a dryer range. I cannot recall one single tree, evergreen, shrub or flower that is a native of California alone that succeeds in our section.

◇ ◇ ◇

Establishing a Commercial Pecan Orchard

BY FRANK V. SCOTT

*A paper read at the Albany Convention
of the National Nut Growers'
Association*

Carrying coal to Newcastle has long been regarded as the last word in ill advised and superfluous undertakings, for Newcastle is credited the world over with an abundance of coal. But to my mind when I approach the subject which has been assigned me and pause to reflect that these words will be read to an assemblage in the heart of the section which leads the world in extensive pecan orchards, I am indeed convinced that carrying cultural information on pecans to Albany is entitled to rank with carrying coal to Newcastle.

And so I am somewhat overwhelmed at the very outset. There is only one thing that supports my weakened self-confidence, and that is the thought that from my personal experience some of you may get a little benefit. If that be so, then will my effort not be entirely in vain.

I am as yet but a beginner in the industry which has been brought to such a highly successful state in the section the members of this Association will be privileged to study at first hand this week. And so I can only describe to you what I have done in the five years I have devoted to the work; touch briefly on the methods I have employed, the troubles I have encountered, the remedies I have adopted and the results attained and refer, in conclusion, to the confidence I have steadfastly entertained as to the future of the commercial pecan orchard.

Out of the mouths of babes, the Good Book says something about wisdom proceeding. I do not refer

Budded Pecan Trees Our Specialty...

We grow the old standard varieties—Stuart, Frotscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to five years old for sale. Come to see or write

TUCK BROTHERS
Thomasville : : Georgia

HARDY ENGLISH WALNUT AND PECAN TREES

for planting in the Middle belt or farther North.

Why not plant some of my hardy budded English Walnuts instead of all Pecans, and not put all of your eggs in one basket. My catalogue is free for the asking.

J. F. JONES
The Nut Tree Specialist
LANCASTER, PA.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin Nursery
F. T. Ramsey & Son
AUSTIN, TEX.

Budded Pecan Trees

Best varieties. Write for price list.

Peach trees 6 cents.

Pear trees 8 cents.

Hartwell Nurseries
Hartwell

to this quotation because of that part of it which mentions wisdom, but to emphasize that my orchard and myself are both still in the infant class.

My first trees were put out in 1910. With the exception of one orchard of seedling trees, they then represented and still represent the only commercial venture of this character in my immediate section of northeastern North Carolina. More than a year before I embarked upon the enterprise, I took up preliminary plans for the orchard with recognized authorities and consulted with them as to soil conditions on the farm. I purposed converting; sought competent advice as to varieties best adapted to my section, and considered various plans for arrangement, planting and cultivation. It is only just that here I should express my gratefulness and appreciation of the invaluable aid given me by

Mr. W. N. Hutt, who, both before I planted and after my trees were put out, came cheerfully and ably to my assistance in times of need.

I finally selected Van Deman, Stuart and Appomattox trees, 4-5 grade, on three-year stock, and these were planted in land that had been under cultivation several years, the most part in a light sandy loam, with no special preparation of the soil. In the holes I used hardwood ashes, woods mould and stable manure, with the top soil at the bottom and finished with the bottom soil at the top.

Tree-boxes for the protection of the young trees I found no benefit. They furnished more of an obstruction to the wind than the trees themselves did, and in many instances were blown against the trees, thus tending to injury instead of serving as a protection. The boxes also interfered with cultivation and were subsequently discarded.

I firmly believe in liberal spacing, preferring from experience, 60 x 60 feet instead of 45x45, with the resulting twelve trees instead of twenty-one to the acre.

Each year I have applied in January or February, around the base of each tree, the mixture of hardwood ashes, woods mould and stable manure, with satisfactory results. It might be of interest to give the annual growth of the trees:

In the first year they averaged eight to ten inches; in the second year, sixteen to twenty inches; the third year, thirty to forty inches, and the fourth and fifth years, five to six feet each year. The trees are now from twelve to twenty feet tall, and will bear a little this year.

Each year I have grown on the land devoted to the orchard such crops as cotton, corn, Irish potatoes and May peas. This year I put in cowpeas, when cut to be raked around the tree bases and piled there. The advantage of inter-

For Sale

FOR SALE. Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. C. W. RANSOM, Houston, Tex.

FOR SALE. Fine paper shell pecans. Varieties: Frostcher, Stuart, Schley and Van Deman. Prices 25 and 30c per pound f. o. b. Chas. Munroe, Tallahassee, Fla.

FOR SALE. Back numbers of THE NUT-GROWER. Parties desiring to complete their files should send list of what they need. The Nut-Grower Company, Waycross, Ga.

FOR SALE. Farm on Illinois Central railroad. 100 acres, 26 cleared, 135 budded pecan trees, best varieties, over 100 attained the bearing age. 8 acres in strawberries; large residence. For particulars address, A. C. DE MONSABERT, 1216 N. Galvez St., New Orleans, La.

PECAN NUTS FOR SALE. James, Teebe, Russell and larger unknown paper-shell varieties. I want thirty-five cents per pound f. o. b. Bennettsville. Mail no offers. Will mail samples to parties meaning business. CHAS. CROSLAND, Bennettsville, S. C. 43

Wanted

WANTED.—A young man with ambition to get into a promising Horticultural business, where pecans and Satsuma oranges will be leading features. No investment of cash necessary. Write Horticultural Service Co., Waycross, Ga.

PECAN TREES

Budded Paper Shells.

BEST VARIETIES
Expert Propagation. Healthy and Hardy Stock.

Write for Prices
T. H. PARKER
MOULTRIE, GA.

PECAN TREES

Our Specialty is growing wellrooted budded and grafted trees of best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

Horticulture

**A Magazine of Trade News
and Information**

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$1 per Year

**HORTICULTURE
PUBLISHING COMPANY**

11 Hamilton Place
Boston, Massachusetts



The May Nut Cracker

The only dependable and successful cracker manufactured. Easy to operate, rapid and lasting. Postpaid anywhere in U. S. on receipt of \$1. Address F. B. MAY, Patentee, Wharton, Tex.

revenue from them during the years of waiting for the pecan to come into bearing is taken into consideration. Undoubtedly, too, the crop cultivation and use of fertilizer has brought up general soil fertility.

My only troubles have been from girdlers and an unidentified bug which feasts on the leaves in August, and neither girdler nor bug has been a serious menace. I burned the ends of the stalks in which the girdlers deposited their eggs and I tried to fight the bugs with "tanglefoot" around the tree trunks, until I discovered that the pest had wings.

The loss of trees has been about two per cent, and this was due almost entirely to planting in land in one corner of the orchard where the soil was quite stiff. After the first year I replanted about forty trees, and all the replants are doing well.

I believed in the beginning, and I am unshaken in the opinion, that a commercial pecan orchard offers an attractive investment and that it will yield gratifying returns. My modesty as a member of the "infant class" forbids a declaration

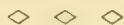
of what I expect, but let me write myself as one who has faith in the future of the industry and whose confidence in the commercial pecan orchard has increased each year since becoming interested in it.



California Walnut Crop

The California Walnut Growers Association issued a circular to the trade under date of December 27, on the 1915 and present walnut situation, which reads, in part, as follows:

California in 1915 turned out the largest crop of walnuts ever produced. All early estimates were overrun. While it is impossible to obtain before the first of February an absolutely accurate figure on the total tonnage, it can now be said with certainty that the crop developed between 14,250 tons and 14,750 tons. In 1914 the production was less than 9,000 tons. The shipments of the California Walnut Growers Association this season were 82 per cent heavier than in 1914.



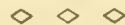
When writing to advertisers please mention The Nut-Grower.

Personal Mention

Dr. J. B. Curtis very promptly reconsidered his purpose to drop The Nut Grower on reading our comment in a former issue. It appeared to him so much like an obituary, that he sent in his renewal at once, which proves that he is still a live one.

One of the earliest pecan planters in the Albany district was the late Nelson Tift, the founder of the city. His son, Nelson F. Tift was an attendant at the convention and gave some interesting data regarding historic trees which he invited the convention to visit.

Mr. S. A. Baker of Chicago has pecan orchards in two South Georgia centers. At the Albany convention he exhibited fine specimens of Alley, Delmas, Schley, Pabst, Stuart and Van Deman.



Nut Recipes

PECAN PRALINES

Two cups of brown sugar, five tablespoonfuls of water, one tablespoon of butter, one cup of pecans. Mix water and sugar, and place on fire. As soon as the mixture begins to bubble add one cup of pecans in halves and one tablespoonful of butter. Let all boil together for one minute, stirring constantly. Remove pan from the stove; stir a minute and drop the contents by large spoonfuls upon paraffin paper or a marble slab to cool.



Two Important Books

Foundations of American Grape Culture; by T. V. Munson. T. V. Munson & Son publishers, Dennison, Texas; 250 pages; price, \$2.00. This is an exhaustive study, by a careful student, of the native grapes of America. Many illustrations of varieties, detailed descriptions and classifications and much original data bearing on this widely distributed native fruit is given. Careful records of observations made during an extended period makes this work of particular interest to the practical

60,000 Grafted Pecan Trees

Wholesale and Retail :: Special Price to Nurserymen

Satsuma Oranges and other Fruit Trees :: Leading Varieties Only
LAFAYETTE PECAN NURSERY, Lafayette, La.



Fine
Pecan
Trees



And Fine Orchards
Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries C.M. Griffing & Company
Macclenny, Florida

as well as the scientific horticulturist.



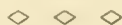
How Farmers Co-operate and Double Profits; by Clarence Poe, editor of The Progressive Farmer. Orange Judd Company, New York. Price, \$1.50 postpaid. This work gives first hand reports on all leading forms of rural co-operation, interestingly told by a careful and conscientious student of rural economics. The author writes personal experience and first hand study and mistakes as well as successes are told in story form and presented in such a way that the book becomes a guide to the co-operative movement as touching farming interests.



Issues List of Farms for Sale in South Georgia

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line, just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops, and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.



Items of Interest

New York's Department of Food and Markets is taking a hand in curbing trusts as well as promoting sales of staple fruit products.

T. H. Parker of Moultrie in his trade list for the current season says of The Nut Grower that "No pecan grower can afford to be without it."

THE NUT GROWER

Hawkeye St. Paul Company

THIS COMPANY HAS AN ATTRACTIVE PECAN PROPOSITION

THIS is simply a safe and sound business movement for utilizing the opportunities for profitable and permanent investment. The plan eliminates the risks, expense and worry of individual ownership of orchards. It is available either for the large or small investor.

Send for a copy of the HAWKEYE HARBINGER. It gives particulars and valuable information

Hawkeye-St. Paul Company

68-69 First National Bank Building
DAVENPORT, IA.

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

G. E. Pleas Plant Co.

"GLEN ARDEN FARM"
CHIPLEY, FLORIDA

The California Almond Growers Exchange was awarded a grand prize for its commercial exhibit of almonds at the Panama-Pacific Exposition.

During the year ending August 31, 1915, 40,986 ears of oranges and 6,658 ears of lemons were shipped from California. The market value of this crop is reported at approximately \$30,000,000.

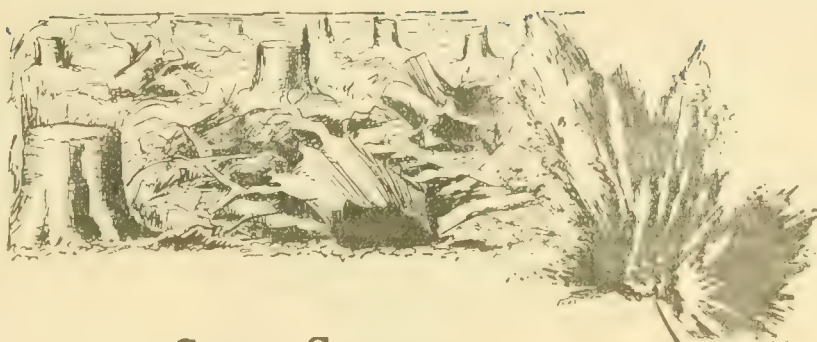
There are great forests of oil palms in Kongo which are to be exploited. Oil mills, warehouses, railways, etc., now being constructed will greatly increase the export of palm oil from that country.

A few years ago the Home Garden Association of Dallas, Tex., distributed 2,000 pecan trees, which were donated by a public benefactor, among the school children of the city. These were set largely at the homes of pupils.

The production of almonds in California, is in a fair way to increase. During the past five or six years a large acreage has been added, and the demand for nursery stock is so great that available supplies have been cleaned up each season.

In the price list of J. B. Wight, Cairo, Ga., for the season 1915-1916 an insert shows his special offer regarding prepayment of express charges on shipments. In this list Mr. Wight renews his offer of The Nut-Grower as a premium to purchasers when requested, provided their bill amounts to a mentioned sum.

Sale City, Georgia, has some progressive spirit which has organized a junior civic league for the purpose of planting pecan trees on the public grounds and streets of the city with the ultimate aim of making the shade trees bear the burden of the city expense for keeping up the civic improvements. The educational importance of this move is sure to work out advantageous results and then it will make it a beautiful city which alone warrants such an organization.



Swap Stumps For Dollars ..

Make your waste acres pay. Get yearly yields from those stump covered fields. Why let the dollars hide under the stumps when the whole world offers good prices for American farm products. Turn this loss into profits.



Red Cross Stumping Powder

will help you clear land—easily—quickly and cheaply. Anticipate next year's demands. Turn the cold, wet days into cash. Clear land now and crop it early next spring. Du Pont Red Cross Stumping Powder is low-freezing and works well up to very cold weather.

Write for Free Handbook
of Explosives No. 325F

It tells in picture and story how up-to-date farmers are increasing yields and profits by using Du Pont Red Cross Farm Powder for stumping, sub soiling, ditching, tree planting and many other things

E. I. DuPont de Nemours & Co.

Wilmington, Delaware



Established by G. M. Bacon 1889

Incorporated 1903

Most desirable Standard Varieties only

Budded and Grafted

PECAN TREES

Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

Send for new catalog and price list

The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

Ocean Springs Pecan Nursery

Season 1915-16

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

15,000 PECAN TREES

In desirable grades and
Standard Varieties. Healthy,
well grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. Lott Co.

Waycross, Georgia

Dynamite a Time and Labor Saver on the Farm

(Continued from page 2)

holes come into bearing one to three years earlier than those in spade dug holes. The jar of the dynamite breaks up the soil several feet each way, letting the roots start off quick.

If you have clay subsoil or hardpan and you want bumper crops you should use one-half stick of 40 per cent red cross dynamite placed every fifteen feet, and three feet deep, and you will get them, if it is done at the proper time. It should be done in the fall of the year and when the soil is dry.

Three years ago I subsoiled a small tract of ground for a party; it was planted and fertilized alike, on each side where no dynamite was used; the result was fine. It was planted to cotton; a dry spell came in August; cotton where no dynamite was used turned yellow and shedded very badly, cotton on subsoiled ground stayed green, had lots more fruit, and was about 8 to 12 inches taller; it made a good crop despite the dry weather.

Cotton was planted to same ground last year with good results. Corn has been planted to it this year but I don't know the results.

If you don't believe dynamite will do good work, and make hard work easy, try some this winter.

◇ ◇ ◇

The Value of a Tree

The value of trees in a city is usually underestimated. A court decision some years ago fixed the value at \$500 each and the Appellate division of the New York Supreme Court sustained the decision. The case in question was one where a construction company finding that certain street trees obstructed their work, proceeded to cut them down regardless of the injury to the owner's property. Suit was instituted against the company and the damages fixed at \$500 for each tree destroyed. The plaintiff recovered the full amount

and the court added punitive damages to the amount of \$1,000.

This may seem a high price for a tree and it is, if we consider the commercial value—what it would bring for lumber or fuel. But from the standpoint of ornament, protection and comfort it is by no means out of the way. Furthermore, a full grown tree requires a lifetime or more to attain highest value for shade or ornament.—Tree Talk.



Books and Catalogues

J. A. Bauer's 35th annual catalogue of choice strawberry plants, Judsonia, Ark., with price list for the season.

Strawberry Plants: catalogue and description of varieties, price list and cultural directions; 30 illustrated pages; O. C. Waller & Bros. Judsonia, Ark.

Thornburn's Seeds for 1916; seed and implement catalogue, with cultural directions and illustrations. J. M. Thornburn & Co., 53 Barclay Street, New York.

The Austin Nursery, F. T. Ramsey & Son Proprietors, Austin, Texas; catalogue and price list; 50 illustrated pages devoted to fruits, nuts and ornamental stock, as the firm embraces landscape work with their nursery operations.

The Hardaway Pecan Packing House; six page reprint from The Nut-Grower's convention story, which describes the initial plant for cooperative gathering and marketing of pecans. Copies can be obtained of J. M. Patterson, Putney, Ga., or from The Nut-Grower.

Productive Orcharding, by Fred C. Sears, Professor of Pomology, Massachusetts Agricultural College; 310 illustrated pages; published by J. B. Lippincott Co., Philadelphia, Pa. Price \$1.50. This is one of a series of farm manuals published by this firm. It is practical, covering all phases of the industry, and valuable for any student, farmer or fruit grower.

A Wise Man

profits by the experience of others and the experience of many others is that the man who

Plants

pecan trees is getting himself in a state of preparedness against the hardships and failures that come so unexpectedly.

Pecan Trees

planted ten years ago are now yielding their owners very satisfactory returns with the promise of an income no other line of horticulture affords.

A grove planted

This Winter

brings you much nearer this income and independence.

For information relative to select stock, guaranteed, write to

Summit Nurseries

Monticello, Fla. :: :: :: Foley, Ala.



WHY DO

THE LEADING PLANTERS AND NURSERYMEN
RECOMMEND TREES GROWN BY

SIMPSON NURSERY COMPANY?

Because we have always delivered trees as ordered, at the time wanted, and packed them so that they arrived in better condition than is usually expected, and the result is that our

TREES GROW

For years past we have shipped more pecan trees than any other nurseryman. At least one third of the pecan acreage in the Albany district is planted with trees grown by us.

Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

Simpson Nursery Company

MONTICELLO, FLORIDA



PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

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12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

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The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XV

February 1916

Number 2



WITHOUT the resolution in your hearts to do good work, so long as your right hands have motion in them, and to do it whether the issue be that you die or live, no life worthy the name will ever be possible to you; while in once forming the resolution that your work is to be well done, life is really won, here and forever.

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THE NUT-GROWER

SCALES AND RELATED INSECTS

Scale insects as a rule have not been found to do very serious injury in pecan orchards, but in the course of time they will doubtless demand attention. The San Jose scale occurs on pecan but rarely, which is fortunate. The cottony scale (*Pulvinaria innumerabilis* Rathv.) is sometimes found, and may be readily recognized from the large, white cottony masses covering its egg sacs. It is never, like the preceding, a very dangerous pest, seldom occurring in sufficient numbers to require remedial treatment.

The walnut scale and another species, a *Lecanium*, are the only species, to my knowledge, noticed in pecan orchards. They can all be treated in the same manner as the San Jose scale, with the lime-salt-sulphur wash, kerosene and other oily preparations, with this reservation—that it is not necessary to resort to heroic measures in their control.

Numbers of sucking insects other than scales are occasionally found on pecans, but not as a rule in injurious numbers. These include plant-bugs of several species, and the pecan phylloxera, which causes little rounded swellings or galls on the leaves. Some form of mites also attack the foliage. —F. H. Chittenden.

SOME PRECOCIOUS TREES

At Homestead, Georgia, which is in Pierce county, Mr. A. C. Snedeker has a pecan orchard of about forty acres, which was planted in 1911. For the past three years he has been gathering a few nuts, and this season he began counting and weighing up the product of twenty trees, and found an average of three pounds per tree. Four hundred and sixty three nuts were counted on a Teche tree, while on another of the same variety were 458. As the Teche product will run in the neighborhood of sixty nuts to the

(Continued on page 26)

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THE NUT-GROWER

VOLUME XV


WAYCROSS, GA., FEBRUARY, 1916

NUMBER 2

STATUS AND POSSIBILITIES OF NUT CULTURE IN THE NORTH

BY THOMAS P. LITTLEPAGE

Read at the meeting of the Northern Nut Growers Association

HE purpose of the Northern Nut Growers Association is to stimulate the production of nuts in the North. We distinguish the North from the South in this regard not because we feel any less interest in the nut industry in the South. The man who once becomes a nut enthusiast is no respecter of Mason's and Dixon's Line or any other line that separates him from an interesting nut tree or from a section in which nuts may be successfully grown. His local interest, however, will, naturally be around his own door-yard and neighborhood. So we speak of northern nut culture and northern nut trees because we live in the North and because this is the section of the United States that needs at the present time the most intelligent direction. The South has been forging ahead for a number of years in this field. In fact, pecan culture promises to become second only to the cotton industry in many sections of that country and interest in its possibilities has attracted to it many conscientious able and prominent horticulturists who are today engaged in pecan growing in the South and who are doing so much to put the pecan industry on an honest and intelligent basis. These men have become specialists in the pecan industry and they know more about it than we do in the North. Consequently they do not need our assistance, even if we were able to give it, and, therefore, without any fear of our being criticized for using the adjective "northern" we can limit our investigations and discussions to nut culture in the northern part of the United States with a full knowledge that our southern brethren can take care of themselves, and, in addition, can render us much valuable assistance, which assistance we most cheerfully invite.

At this point, however, in connection with the use of the terms "northern" and "southern," it may be relevant to make a few observations as to the possibilities in either section. While it is true that the South has a long record of the North in pecan

culture, yet the North affords an opportunity for the cultivation of nuts which is not possible in the South. The South today is the home of the delicious varieties of pecans which are a delight to the consumer and a source of fascination and profit to the intelligent producer, but it must be remembered that the northern pecan belt has many excellent varieties that are "good enough." In addition to this, the North is the home of the black walnut, the fine shagbark hickory, the butternut, the chestnut, the hazel-nut, the chinkapin and is also adapted to the hardy varieties of the English and Japanese walnuts. All of the nuts just named certainly offer an ample field for our interest and enthusiasm, and in addition to the keen delight which comes with the successful growing of these trees, there is a possibility of profit which I do not think is excelled in any horticultural undertaking today.

First then, what word of advice or instruction can the Northern Nut Growers Association bring to the prospective nut grower which will be of help? For, after all, the success or failure of this association depends largely upon its ability to help the grower or prospective grower. Before we undertake to give suggestions about the development and culture of nut orchards or to make prophecies as to possibilities, let us stop and take stock for a moment of the present status of the nut industry in the North and consider what we have to build on and what materials we have with which to work. Mistakes have been made in the past by the prospective nut growers because they did not stop to consider the possibilities of the nuts that were native in their own locality, but looked abroad for something else. This is characteristic of many people. "Distant fields look green," and of all the imported nut trees, none except the English walnut have been of any success here whatever, while, in one instance at least, their importation has resulted in introducing into this country the fatal chestnut

blight, which probably came in on uninspected stock from Japan. We have better native chestnuts in this country than any foreign chestnut and the blunder of trying to get something different is costing the country millions of dollars through the scourge of the chestnut blight, which threatens to wipe out the industry. It reminds me of the epitaph on the tombstone which read: "I was well and wanted to be better, took medicine and here I am." Therefore, let us consider what nuts we have worth while.

The Pecan

First, we have the northern pecan which is native in certain portions of a belt approximately 150 miles wide, with Evansville, Indiana, on the 38th parallel, as the center. I do not mean to say that the pecan will succeed in all portions of the northern half of this belt or that it may not succeed in many sections farther north. The question of climate, as modified by proximity to oceans and large bodies of water or as made more rigid by the absence of these protections, may decrease or increase the latitude at which the pecan can be successfully grown. The orange, for instance, is one of the tenderest fruits and yet, on the western coast, orange groves are flourishing at the same latitude as Philadelphia, which is nearly on the 40th parallel, although it is unnecessary to say that an orange grove would not survive within four or five hundred miles of the 40th parallel any place else except on the favored western coast. The southern varieties of pecans will not flourish in the north and we do not know whether the northern varieties will flourish in the South.

The pecan is a hickory and the northern trees are very hardy and thrifty. Many varieties have been discovered the last few years which are thought to be worthy of propagating. Among them are the "Indiana" and "Busseron," from near Oaktown, Knox county, Indiana; the "Niblack," from Vincennes, Knox county, Indiana; the "Warrick," "Green River," "Major," Kentucky and "Posey," all from the Evansville section; the "Norton," from Clarksville, Missouri, and several other varieties.

English Walnut

The next most important nut, and probably competing very closely with the pecan for popular favor, is the English walnut, which is perhaps the only nut that has been successfully imported for growing. Since the earliest Colonial days, seedling nuts have been brought from France, Germany and other parts of Europe and have been planted up and down the Atlantic coast. Most of the trees from these plantings have not been able to permanently withstand climatic conditions, but, scattered here and there throughout the North and East, are individual trees of apparent hardiness which bear nuts in size and quality comparing favorably with

the English walnuts we see on the market. Among the various hardy varieties of the English walnut are the "Rush" and "Nebo," from Lancaster county, Pennsylvania, introduced by Mr. J. G. Rush, the pioneer propagator of the Eastern states. Another is the "Hall," from the shores of Lake Erie, the "Pomeroy," from Lockport, N. Y., a short distance from Niagara Falls; the "Rumford," from Wilmington, Del.; the "Ridgway," from Lumberton, N. J.; the "Holden," from Hilton, N. Y. the "Boston," from Massachusetts; the "Potomac," "Barnes" and "Weaver," from Washington, D. C.; and a number of other varieties. The location of the parent trees just named will give some idea of the probable hardiness of these varieties.

Shagbark Hickory

The thin-shelled shagbark hickory is a nut that is coming more and more into favor and is well worthy of propagation. The first shagbark recognized as a distinct variety was the "Hales," located and named by Henry Hales, of Ridgwood, N. J., about 1874. This is a very large, attractive, thin-shelled nut, but has been somewhat superseded by other and superior shagbarks. Dr. Robert T. Morris, of New York, has been making a systematic search for several years for trees bearing shagbarks of high quality and merit, and has been very successful in bringing a number of such nuts to the public attention, including the "Taylor" and "Cook." The "Swaim," from South Bend, Ind., is an excellent shagbark; the "Weiker," from Lancaster county, Pennsylvania; the "Kirtland," from New England; the "Rice," from Illinois; and another very fine shagbark from northern Kentucky, which was brought to public attention by R. L. McCoy of Lake, Ind.

Black Walnuts

Throughout the whole north are tens of thousands of seedling black walnuts, many of which are of excellent quality, but, so far as is known, there are but two recognized varieties, the "Thomas," introduced during the eighties and propagated to a limited extent, and another from Lamont, Mich.

Butternut

The butternut also is quite common in much of the same territory as is the black walnut and even in regions farther north, but, so far as I have knowledge, not a single variety has been named.

Japanese Walnuts

Seedlings of two species of Japanese walnuts are quite common along the Atlantic coast and as far inland as the Mississippi river. They are also grown on the Pacific coast to some extent, but apparently no varieties have been recognized.

Another nut which is confused with the Japanese walnut is botanically known as *Juglans mandshurica*. In character of growth the tree resembles the Japanese species, but the nut resembles

more our American butternut and they are sometimes confused. A short time ago a gentleman in New Jersey who had planted some nuts of the Japanese varieties later cut down the mature trees because he thought they were American butternuts.

Hazel-nuts

It is never safe to use the term "hazel" without explaining that it correctly applies also to the species brought from Europe and more commonly known as filberts. According to the late Mr. Fuller, the Germans discriminated between hazels and filberts entirely by the shape of the husk. A nut having a husk that extended and came together beyond the end of the nut was called filbert, meaning beard. Those having shorter and more open husks so that the nut protruded, were called hazels after the German word "hassel,"—hood, in English. It will readily be seen that once the nuts were separated from the husks, it would be impossible by their classification to determine whether they were hazels or filberts. The Americans generally accept the term hazel to apply to both the American and European species.

In the early history of our country extensive and persistent efforts were made to introduce the European hazels, and no wonder, for of all nut trees this species seems to yield most readily to

garden culture. They are readily capable of adapting themselves to most any kind of soil and even to rocky ledges which would be impossible to cultivate. They attain their greatest perfection in good soil and, under proper cultivation, the trees come into bearing early and the nuts mature early in the fall, well in advance of other species. The hazel, however, like the chestnut, has met with a fatal disease. It is a blight which seems to exist everywhere except on the native species, which are so far immune as to show little or none of its effects. The American hazels, however, act as host plants to the blight, which thus quickly spreads, with fatal results to the European species. Of all the plantings which have been made during the past one hundred and fifty years, it is safe to say that there are less than half a dozen hazel orchards in the eastern states which have not succumbed. It seems quite probable that a golden opportunity is awaiting someone who is willing to go through the forests of our eastern states, especially those in lower New England, in search of individual hazels from which to propagate new varieties. Among the heavy bearing shrubs, which exist in the section referred to, it is certain that many hazels could be found well worth propagating.

(Continued on page 23.)



THE BUILDING OF AN INDUSTRY

BY PROF. W. N. HUTT

(Continued from last issue)

Most of those present have gained their knowledge of pecan growing from experience and all who have studied under this school master know that experience though very thorough is a very expensive teacher. You have learned how to grow a pecan tree, but are you applying this valuable knowledge to getting out of all your orchard? Are you each season getting the best out of all your orchard? Are you each season getting all the growth you should have on all your trees? Have you horse power enough to assure each tree all the cultivation it should get to do its best, or are they struggling against grass and weeds and sassafras bushes? When any trees or blocks of trees in your grove are not getting the attention they should get to make them do their best, then you should know that your orchard is too big. Sell or give away what you cannot handle and bring the balance up to efficiency lest you be eliminated in the ten, fifty or ninety per cent of unsuccessful orchards, the wastage of the pecan industry.

The Future of the Industry

It is the wise business man who looks as far as

possible into the future. Let us as pecan growers question the future and shape our policy to best foster the interest of our industry. What will be the future demand for our product and at what probable prices? The answer to these questions will show us whether we should plant more groves and encourage others to do so. A study of imports and exports and of the older allied fruit and nut industries will be valuable to us in answering these questions and in shaping our future policy. Let us look at nut production in the United States. The last census report lists bearing Persian walnut trees at 727,000, with a production of twenty-two million pounds valued at \$2,297,000; almonds, 1,649,000 trees valued at \$712,000. A careful estimate gives the number of pecan trees in commercial orchards at a little over half a million trees. We can therefore plant a quarter of a million more trees before we get in the class with the walnut growers and a million and a quarter more before we begin to approach the almond growers. Both of these classes of nuts are being planted continuously on the Pacific coast.

(Continued on page 26)

The Nut-Grower

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UNPUBLISHED 3

Our suggestion for a pecan slogan is already producing entries. As these come in they will be published and later our readers will be asked to decide which is the best.

A company at Ringland, Okla., paid out over \$25,000 for pecans during the last season. The prices paid were from 6 1-2 to 7 1-4 cents. Another Oklahoma firm paid out about \$15,000.

In a recent letter to the editor Mr. C. A. Reed, of the Bureau of Plant Industry, says: "The nut work and the demand by the public for general information is increasing so rapidly that I am weeks behind in attending to the correspondence alone."

The commercial importance of nuts increases in the same ratio that their high food value is recognized. Nuts are simply rich in those elements that give strength and energy. Their cultivation thus far in this country is not keeping pace with the increasing demand.

A tenant farmer in Jefferson county, Oklahoma, made \$1,500 for himself by gathering native pecans on the farm he occupied during the last season. This paid his rent and left him a substantial sum. The owner of the land received a half of the profits from the pecans gathered from the place as well.

Something went wrong with a portion of the November issue of The Nut-Grower after it had been placed in the mails. We had so many complaints about failure to receive copies of this issue that we fear others who did not notify us may be short. As long as our supply lasts, we

will be glad to send duplicate copies to all who request them.

Not long ago the bigger a pecan was the more attention it attracted and the higher was the price obtained for it. One of the changes which comes with more careful valuation of varieties is the recognition of quality, regardless of the size of the nut. A Mississippi grower gives a limit beyond which he thinks the pecan cannot safely go in size. He says: "Many years of observation impresses the fact that our best nuts never exceed one inch in diameter or two in length. When the pecan nut attains or exceeds two inches in length, the limit that insures the finest virtues of quality and perfect condition has been exceeded."

In Bulletin No. 189 of the Georgia State College of Agriculture for 1915 is included a report of the committee of revision of the Georgia fruit catalog. Prof. J. W. Firor, the chairman, made up the pecan list from carefully selected sources. The statement is made in the report that there has been no industry in the South that has developed with the rapidity of the pecan business. Seventy-three varieties are catalogued, each being described by symbols and given a territory in which they are best suited. Of these varieties, fifty-two are not recommended or are classed as being of uncertain value. Eleven of them are classed as of commercial value but as having some poor points. These are Delmas, Frotscher, Havens, Mobile, Moore, Nelson, Randall, Russell, Van Deman, Waukeenah and Carman. Ten are classed as standard or leading varieties of commercial value. They are Alley, Bradley, Curtis, Moneymaker, Pabst, President, Schley, Stuart, Success and Teche.

As far as the register of names on the Albany convention roll shows, there were fifteen states represented. Several states were conspicuous by having only one name on the register. Three of these were in the pecan belt—Texas, Mississippi and South Carolina.

Louisiana and North Carolina did some better with two each, while New Jersey, New York, Kentucky, Pennsylvania and Wisconsin did equally as well. Alabama had 15 representatives, Florida 25 and Georgia 60. The best showing, however, was made by the city of Chicago, which had a larger delegation present than any state, with the exceptions of Georgia and Florida. Probably twenty-five per cent of those attending neglected to register. Then a considerable number did not arrive until the last day of the convention and after the formal sessions had closed. The one occasion when practically all were together was at the Hardaway barbecue, when about 225 people attended.

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Waycross, Georgia

Status and Possibilities of Nut Culture in the North

(Continued from page 21)

Turning now from this brief history of northern nut trees, let us consider the future of the industry as viewed in the light of sound theory and actual observation. It is unnecessary to present any argument—why nut trees should be planted. Nuts afford the highest grade food known to science. They are wholesome, healthful, strengthening—in fact without a single objectionable feature, so far as I know, as an article of food, and when one considers that food is the basis of human existence, no further argument is necessary to warrant interest in one of the best foods known.

Then how shall we advise the prospective grower of a nut orchard? First, let him determine what kinds of nuts thrive in his vicinity. The prospective grower in the latitude of Evansville can indulge himself to his heart's content, for he can grow successfully the pecan, English walnut, butternut, hazel and, up to date, the chestnut. But success in growing any one of these trees depends upon proper information, proper varieties, proper soil and proper care. Suppose a man, in the Evansville latitude, for instance, desires a pecan orchard. What should he do? His quickest way, if he has wild seedling pecan trees growing on his farm, would be to have the wild trees top-worked to well-known varieties. If he has no seedling trees then his next best plan is to purchase budded trees of good varieties from some honest nurseryman, set them not less than sixty feet apart and cultivate and care for them. Will they grow around fence corners and creek banks? Yes, if you have plenty of time to wait. They will not, however, be in a hurry and it may be your grandchildren who will gather the nuts. But a cultivated orchard of budded pecan trees of the

right varieties ought to come into commercial bearing as soon as does an apple orchard. Mr. W. C. Reed, of Vincennes, reports Busserons that were budded four teen months ago setting as high as sixteen nuts this year. That is, the second summer after they were budded. If the trees are of the right varieties, well cultivated, in good soil, and if you care enough for them to throw some fertilizer around them, they will please you by their growth and soon become very profitable.

Now suppose one wants an orchard of English walnuts. If you have wild black walnut seedlings on your farm, by all means have them top-worked to fine varieties of English walnuts, for the black walnut is the best root for the English walnut. If you have no seedling trees, go to some reputable nurseryman and buy varieties of hardy English walnuts budded on hardy black walnut stocks. Set them not less than fifty feet apart and cultivate and care for them. Mr. Rush reports one budded Rush tree four years old bearing fifty-seven walnuts this year. I saw a Rush in Washington City the other day, two years old carrying about a dozen walnuts; also a Hall, of the same age, carrying about the same number. Both trees were thrifty and not much over waist high, and every terminal twig had from one to two nuts on it.

If you have wild hickory trees growing on your farm, have them top-worked by the slip-bark or budding method to fine varieties of shagbarks. In the absence of wild hickories, I believe the next best method of starting an orchard of budded shagbark hickories is to buy them budded on the northern pecan stocks. The hickory is not the best stock for the pecan because it is of slower growth, and for the same reason the pecan ought to be the better stock for the hickory. But the hickory does not grow as rapidly as the English walnut or the pecan and

requires more patience.

The hazels are going to afford a great field for the nut grower, as they are native to a wide territory, embracing the Middle West, the North and the East and ought to be profitable. A few years ago I found a fine large hazel growing on my farm in Warwick county, Indiana. I dug up some of the roots of this bush and planted them in my garden at Boonville and in three years they were bearing fine clusters of hazels larger than those borne by the parent bush. I think farmers would find it profitable to set out hedges of native hazel bushes around their fields and fences and on hillsides.

Butternuts, black walnuts and bechnuts also offer a fertile field for experiment. Any variety of butternut or black walnut can be propagated by budding or top-grafting them on seedling stocks.

I should like to suggest that each farmer in the nut growing belt set aside at least ten acres of land for a nut orchard. It will give him a new interest in life and afford him more pleasure and relief from the ordinary monotony of farm work, I believe than any other line of work he can pursue. If Ponce de Leon had planted a nut orchard in this country instead of searching for the fountain of perpetual youth he could have spent his old days in interesting, profitable and fascinating work instead of in despair and disappointment.

But some of the practical questions asked are, "What is the cost of a nut orchard?" and "How soon will it bear?" and "What will it be worth when it does bear?" No man can answer these questions with any degree of certainty, for everything that man attempts has its drawbacks and disadvantages. First-class budded nut trees cost from one to two dollars apiece. The balance of the cost depends largely upon the intelligence and efficiency of the labor applied in setting

and cultivating. When will they bear? That depends altogether upon who owns them. If properly cared for they will begin setting some nuts in a few years and will increase the crop as the years go by. A pecan tree ought to bear successfully for fifty years—possibly longer, and ought to be bearing nicely in eight years if properly cared for. But success depends upon the care and intelligence with which the original selection of trees and soil is made and upon proper cultivation. I have set an orchard of northern varieties of pecans budded from the parent trees in the Evansville section on my farm in Maryland this spring. The land cost me sixty dollars per acre. When they are ten years old they ought to be worth at least five hundred dollars per acre. I do not know how much more this grove of nut trees will be worth in ten years, but I would not option them at the present time at that price. I have about the same confidence in the English walnut.

I have always been conservative on these matters and always expect to be because in conservatism lies safety. These figures I have given you are merely my personal opinion. I have seen pecan groves ten and fifteen years old for which I could not have given any more than the land was worth on which they were growing. If any one has a notion that he can make money in nut culture without intelligent exertion, he had better go into some other line of business in which there are men having a fair degree of success with unintelligent effort. I know of no nut grove in the whole United States that is succeeding without intelligent application, and, on the other hand, I do not know of a single grove which with intelligent application is not succeeding. I am a "conservative-optimist." I have been talking about nut culture for a number of years and expect to see every hope and estimate

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which I have expressed fulfilled, and after all has been said and considered my final advice is to plant nut trees.

"PAPER-SHELL" PECANS

At the Albany convention of the National Nut Growers Association, President W. N. Hutt said:

I wish to register a protest against the incorrect use of the term "paper-shell" in relation to pecans. There is no such thing as a "paper-shell" pecan, there never has been, and in the historical nature of the pecan there never can be. This incorrect terminology was doubtless borrowed from the almond, but it is an utter misfit as there is nothing in any way papery about the shell of any pecan. Nature knew the kernel of the pecan was too rich to do up in paper. Such an epithet is incorrect, untrue and misleading. The purchaser who buys so-called "paper-shell" nuts and finds them with varying degrees of hardness and thickness feels that he has been taken advantage of and brands the whole pecan business as a fake. The word "thin-shell," however, can aptly and correctly be applied to many varieties of pecans. The term "paper-shell" has been so extensively exploited in the flamboyant and misleading literature of wild cat pecan promotion companies that the reputable nurseryman and grower would do well to avoid its use.

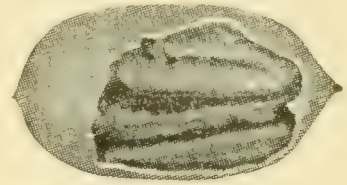
PECAN SLOGAN CONTEST

We invite our readers to participate in a contest for a suitable slogan for general use, showing the merits, attractions and value of the pecan. As entries are made by letter, they will be printed in our columns. With the August, 1916, issue the contest will close and the voting will begin and continue until our October issue goes to press, when the result will be announced. Any subscriber can suggest a slogan and any

one whose name is on our books will be entitled to one vote for first choice and one vote for second choice of the slogans suggested.

ENTRIES

1. For permanent pleasure and plenteous profits plant pecans.
2. Pecans if you will eat
And less of bread and
meat,
A happy life complete,
No doctor's bills to meet.
3. To grow pecans produces
wealth
To eat pecans induces
health.



The Pecan Business

In a concise booklet—FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.

B. W. STONE :: Thomasville, Ga.

G. H. Tomlinson

NURSEYMAN

Putney, Ga.

Everything Suited to the South

FOR SALE

For Sale—Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. C. W. RANSOM, Houston, Tex. 7-8

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

For Sale—A thousand pounds of medium sized, fine quality, thin shelled Louisiana pecans. Offered in bulk or small lots to suit purchasers. Attractive price. W. M. ELLISON, Lafayette, La. t

Pecan Nuts for Sale—James, Teche, Russell and larger unknown paper shell varieties. I want 35c per pound f. o. b. Bennettsville. Mail me offers. Will mail samples to parties meaning business. CHAS. CROSLAND, Bennettsville, S. C. 1-3

Get Our Free Catalog Ask Our Advice Freely

The book describes the most complete assortment of trees, shrubs and plants to be found in any Southern nursery. Our advice is based on 30 years of experience in growing these under varied conditions. We can help you.

Royal Palm Nurseries

Have trees and plants for every purpose—orchard, grove, home, office or store. These are grown right and sold at fair prices. We help you to succeed with them. Send for catalog and inquiry blank.

Reasoner Bros.
Royal Palm Nurseries
376 Benedict Ave. Oneco, Fla.

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

Catalogue for the asking

P. J. Berckmans Co.,
FRUITLAND NURSERIES
Augusta, Ga.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery
C. FORKERT, Proprietor

OCEAN SPRINGS, MISSISSIPPI

When writing to advertisers please mention The Nut-Grower.

SOME PRECOCIOUS TREES

(Continued from page 18)

pound, this would show about seven and a half pounds per tree only forty months from planting.

Mr. Snedeker's Curtis trees have not been idle, two of them yielding 222 and 212 nuts each. Alley made the next best record for the 1915 crop. This orchard, in common with others in South Georgia, suffered from the November, 1914, freeze.

THE BUILDING OF AN INDUSTRY

(Continued from page 21)

When we come to compare the nut production of the United States with our imports of nuts and nut products, it looks as if we had scarcely made a start in the way of a nut industry. While our largest annual production has been but four and a half millions of dollars' worth, our imports amount to over fifteen millions. We import annually from Spain, France and Italy over eighteen millions pounds of almonds, on the average more than has ever been produced in California in any two years. We import also from European and other countries annually about thirty million pounds of English walnuts, one and one half times as many as California ever produced in the year of largest crop. Two million dollars worth of coconuts and their meat was imported into the United States in the year 1910. Besides all the peanuts we grow, we import twenty-nine million pounds a year of foreign goobers. Added to this are twelve million pounds of filberts and hazel nuts.

The average imports of almonds has increased from less than nine million pounds in 1901-1905 to more than fifteen million pounds in 1905-1910, or nearly seventy per cent. The imports of English walnuts have increased in the same time from nineteen to twenty-nine millions, an increase of over fifty per cent.

From 1906 to 1910 filbert imports have increased from seven to eleven millions.

From this enormous increase, both in nut production in the United States and also in imports it would appear that there is little danger of over-planting of nut orchards for a long time to come because we do not yet produce one-fourth of the nuts we consume. We have never in the year of greatest crop produced enough pecans for home consumption, to say nothing of supplying the demand of the world outside.

Just at this time, I believe we are approaching the most critical time in the whole history of our industry. To safely pass this danger point will require the loyal support and the energetic co-operation of every member of our association. Our groves are each year coming into greater production and the all-important question is, who shall control their output? Shall it be the jobber or middleman who creams off the profits of the industry by beating down the buying price to the grower and inflating the selling price to the consumer or shall it be the growers themselves who will reap the legitimate profits of their years of waiting? The question of a practical plan of of marketing the products of our orchards is the most important one that will come before this convention. I intend to give the fullest opportunity for a thorough discussion of this question and I bespeak the help and co-operation of the association. As I said before, the time is a critical one. If we do not now act wisely and energetically, we may see our growing industry strangled by organizations of outside capital, which will depress production on the one hand and limit demand on the other. Let each one give his best thought to the solution of this important problem. If we cannot successfully solve it, I see little hope for the future of our pecan industry. I have, however,

**Budded Pecan Trees
Our Specialty...**

We grow the old standard varieties—Stuart, Frottscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to five years old for sale. Come to see or write

TUCK BROTHERS

Thomasville : : Georgia

**HARDY ENGLISH
WALNUT AND
PECAN TREES**

For planting in the Middle belt or Farther North

Why not plant some of my hardy budded English Walnuts instead of all pecans, and not put all of your eggs in one basket? My catalogue is free for the asking.

J. F. JONESThe Nut Tree Specialist
LANCASTER, PA.**In the HEART
of the Texas
Pecan Belt**

We have all the leading Texas and Southern varieties of pecans Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin NurseryF. T. Ramsey & Son
AUSTIN, TEX.**OVER 100 ACRES OF
CHOICE STRAWBERRY
PLANTS**

Get our free 32-page catalog describing nearly 30 varieties, including SUPERB and PROGRESSIVE. See our prices before ordering your plants

O. C. WALLER & BROS., Box 40, Judsonia, Ark.
Largest Plant Growers in the State.

the utmost confidence in the intelligence and business ability of our growers, not only to work out their present problems, but to place this growing industry on a correct horticultural and financial basis, so that its future may be assured.

GEORGIA STATE HORTICULTURAL SOCIETY

The winter meeting of the Georgia State Horticultural Society was held at Athens, January 17-19. The following officers were elected:

President, R. C. Berckmans, Augusta, Ga.

Vice-President, B. W. Hunt, Eatonton, Ga.

Secretary, T. H. McHatton, Athens, Ga.

Treasurer, J. B. Wight, Cairo, Ga.

ITEMS OF INTEREST

In Siam, the cocoanut business is increasing, over a million and a half trees being reported as being in a flourishing condition in eight provinces.

The Arbuckle Almond Growers Association, of Colusa county, California, has decided to build a warehouse for their own protection. They do not approve of the tactics employed by certain almond speculators.

The price of walnut lumber is evidently holding its own. A single tree in Bartow county, Georgia, recently sold for thirty-five dollars. This indicates that it is worth while to have some of these trees growing on every farm.

The Bureau of Chemistry has ruled that in view of the fact that doubts have existed as to whether walnuts packed in sacks and cases in which they are customarily offered for importation into the United States or are shipped in inter-state commerce, are in package form within the meaning of the net weight amendment to the Federal Food and Drugs Act, that on and after May 1, 1916, walnuts in such sacks and cases that are not conspicuously and plainly marked with the quantity of the contents will be deemed to be misbranded.

The adaptability of the Chi-

nese wood-oil tree for cultivation in northern Florida seems to be proven by experiments recently made. A tree at Tallahassee is said to have borne two bushels of nuts last season.

CARE OF SATSUMA ORANGES

A subscriber tells as follows how to treat Satsumas:

Cultivate like a house afire up to September 1. Fertilize with a quart of cotton seed meal per tree the first year, half a gallon the second year. Loosen up soil after every rain during the growing season. Pick off fruit the second year. Do not let trees overbear the third year. Dust mulch between trees in summer and cover crops in winter.

THE PECAN INDUSTRY

By Wm. P. Bullard

Read at the meeting of the Georgia State Horticultural Society.

Pecans are good shippers and excellent keepers. If kept in a cool place, not necessarily in cold storage, they may be preserved for ages in perfect flavor.

Within a fortnight a car load of

Atlantic Coast Line

"The Standard Railroad of the South"

SEE A. C. L. TICKET AGENTS REGARDING WINTER TOURIST FARES, SCHEDULES, ETC., TO THE VARIOUS WINTER RESORTS. :: ::

Passenger Service Unexcelled



Make Your Waste Acres Produce

Clear that idle land. Remove the stumps and boulders. Straighten the crooked creeks. Improve your soil. Increase your crops and the value of your farm. Remove the handicaps that hinder your work and profits.



Red Cross Farm Powder

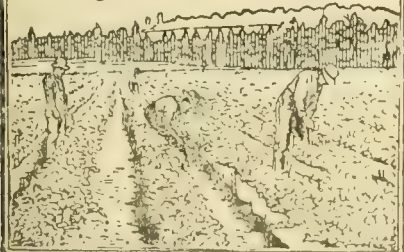
will help you clear land quickly, easily and cheaply. Get those unproductive acres in working order now and crop them early this spring. Thousands of farmers everywhere have found Red Cross Farm Powder a wonderful help.

Big Book Free

contains 188 pages of interesting facts. Explains the use of Red Cross Farm Powder for land clearing, subsoiling, ditching, tree planting and many other things, and tells how this modern farm help has solved for other farmers the very problems that perhaps now bother you. Write today for

Hand Book on Explosives No. 325F

E. I. Du Pont De Nemours & Co.
Wilmington Delaware



oranges was sold at auction on South Water Street, that great produce mart of Chicago, for less than the freight charges. Instead of receiving a nice check to represent profits of years of toil, years filled with more or less anxious thought, the grower of that car load of oranges received a bill for freight deficiency. Please remit!

I come from Albany, where they raise watermelons and cantaloupes in large measure. It is not uncommon for the growers to get bills for freight shortage; one large shipper has recently been sued by a railroad for this reason. Please remit: does that have a familiar ring to you shippers of perishable products?—please remit! Frequently in large cities on Saturday afternoons in the summer time car loads of fine softening fruits are handed out to fruit vendors and to the poor for a pittance the measure because it could not be kept over until Monday morning. In the aggregate this represents an enormous economic waste.

Not infrequently perishable fruit rots on the trees for lack of pickers or a profitable market; and perishes in the warehouses on account of dearth of refrigerator cars. I once knew the case where a powerful refrigerator car line, with the connivance of the railroad company, completely shut out of the market the entire fruit crop of a certain isolated community simply because those growers had had the audacity to make a more favorable contract with another but less influential refrigerator line. The more powerful refrigerator car line wanted to teach those presumptuous growers a kindergarten lesson in trust manipulation and the railroad company being a willing ally the trick was done with neatness and dispatch, and those helpless growers lost their season's crop because their stuff had to be marketed "right now." No such feverish haste attend the pecan

business; and I would like to see the photograph of the commission merchant, no matter how morally delinquent, who would have the audacity to send back a "please remit" bill with a shipment of pecans.

While the pecan tree very naturally has its insects and diseases yet it has never been necessary for any state to petition the Federal government for an appropriation of \$3,000,000, as the citrus growers of Florida are now doing to fight the citrus canker. And it has never been necessary for any state to demand the destruction of many thousands of pecan nursery stock as has recently been done with the citrus stock in a sister state.

There is no import duty on pecan nuts; not being produced outside the United States, excepting in small quantity in Mexico, a discriminating tariff has not been dreamed of. Whenever our congress considers tariff changes, there immediately appears a strong lobby in Washington in the interests of the citrus fruit growers of the country. Wonder is, how much of the high value of California orange lands is due to Uncle Sam's patronizing tariff. Instead of worrying over the tariff, the pecan grower is free to expend his energies in constructive efforts to build up a large export trade.

It is said that comparisons are odious and I do not make these because I love other horticultural lines the less but that I love the pecan the more. Thousands of our good people have made and today are making fortunes out of the peach, the apple, the orange and other of our delicious fruits; but as the time is short since the pecan has come upon the stage for due recognition, and as it is a somewhat little known product, I am quite sure it is pardonable if in a meeting of the Georgia State Horticultural Society I set out some facts in a somewhat striking form.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall

Get Our Special Prices

We have other varieties and a stock of 15,000 Satsuma orange trees for sale. Write Us.

The Paper Shell Pecan
Nursery, Ltd.

W. M. Ellison, Mgr. LAFAYETTE, LA.

Rood Pecan Groves

Albany, Ga.

Pecan Trees
Pecan Nuts
English Walnut
Trees

Write for
Prices . .

C. M. Rood, President

Mrs. W. R. Stuart
Ocean Springs, Miss.

Pecan Nuts and Trees

The true successor of Col. W. R. Stuart

Fine Young Orchards
For Sale

Trees now in second year; eight acres; five standard varieties; Splendid location. One-fifth cash, balance in five annual payments. Particulars on request
A. J. Strickland, Blackshear, Ga.

WHY DO

THE LEADING PLANTERS AND NURSERYMEN
RECOMMEND TREES GROWN BY

SIMPSON NURSERY COMPANY?

Because we have always delivered trees as ordered, at the time wanted, and packed them so that they arrived in better condition than is usually expected, and the result is that our

TREES GROW

For years past we have shipped more pecan trees than any other nurseryman. At least one third of the pecan acreage in the Albany district is planted with trees grown by us.

Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

Simpson Nursery Company
MONTICELLO, FLORIDA

Established by G. M. Bacon 1889

Incorporated 1903

Most desirable Standard Varieties only

Budded and Grafted

PECAN TREES

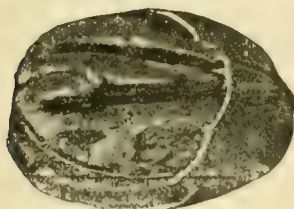
Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

Send for new catalog and price list

The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

Pecan Trees

Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**

Box 21.

Macleenny, Fla

And be it known now that the acreage in Georgia planted to the named varieties of pecans is very nearly equal to the combined acreage of the remainder of the planted area in the entire country; and be it known further that a certain hustling city in Southwest Georgia is easily entitled to the distinction of being known as the hub of the pecan universe; and that city is Albany.

The pecan orchard ownings heretofore have been in small acreages, as a rule, but the tendency now is toward larger holdings. In the infancy of the business, when problems were many, and the assurances not so certain as now, it was then the smaller investor who enabled the problems to be worked out and the industry brought up to the point where it is now attracting the man who wants from one hundred to five hundred acres; and the syndicate that buys \$400,000 worth of pecan orchards at a time. Not so long ago, I heard mentioned, sub rosa, in connection with a pending pecan deal, the name of one of the foremost financiers of the country, a man whose name is the synonym of confidence and "big business." And this day is coming sure, because the pecan business—the growing of the finest nuts on earth—is too good, too certain and altogether too promising for it to be otherwise.

Overproduction? That is a boggy man that has to be knocked down ever now and then. Pecans grow to their perfection in Southwest Georgia, where our best men say are most ideal conditions of both soil and climate. But few other sections of the country come within hailing distance of Southwest Georgia, and while pecans are planting in many other sections of the country, yet comparatively few of them will realize their highest expectations as to yields of fine nuts. And not all of those who plant trees in our most favored section will

be efficient enough to produce the maximum yields. And hence the production will not necessarily be commensurate with the plantings. It has been said by one of our best orchardists that not more than one person in every ten thousand has ever seen one of our large thin-shelled nuts.

There are some pecan orchards in the Albany section under ten years of age that \$1,000 per acre would not buy. I have one which I know will pay me a good rate of interest on a valuation of \$1000 per acre when it is ten years of age; and it will increase in productiveness for many years thereafter. Can you beat it? Think it over.

The Battle Creek Sanitarium at Battle Creek, Mich., is the greatest institution of its kind in the world, and uses nuts to the exclusion of meats. I am in receipt of a recent letter from Dr. J. H. Kellogg, superintendent of that famous sanitarium, dealing with the food merits of the pecan. Dr. Kellogg says:

"You ask my opinion with reference to the pecan. I regard it as one of the very finest of nature's choice products. A pound of pecans contains more nourishment than any other known food. A pound of pecans contains as much protein as half a pound of meat, as much fat as three-fourths of a pound of butter and as much starch and carbohydrates as one-fourth of a pound of bread; so that a pound of pecans is the equivalent of a pound and a half of other highly concentrated and nourishing food. In comparing total values, a pound of pecans is worth, in nutritive value, two pounds of pork chops, three pounds of salmon, two and a half pounds of turkey or five pounds of veal.

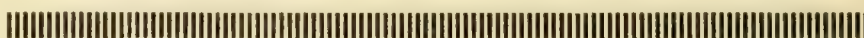
"An acre of land planted in pecans will produce from four to ten times as much



60,000 Grafted Pecan Trees

Wholesale and Retail :: Special Price to Nurserymen

Satsuma Oranges and other Fruit Trees :: Leading Varieties Only
LAFAYETTE PECAN NURSERY, Lafayette, La.



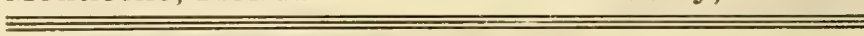
Nursery Stock That Excels

Write us for catalogue and information about Pecans, Citrus, General Nursery Stock, Ornamentals and Roses.

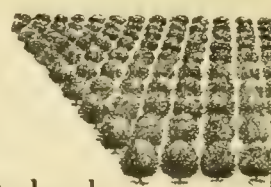
SUMMIT NURSERIES

Monticello, Florida

Foley, Alabama



Fine
Pecan
Trees



And Fine Orchards

Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties. Our system of growing, digging and handling pecan trees insures success. Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries

C.M. Griffing & Company
Macclenny, Florida

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

G. E. Pleas Plant Co.

"GLEN ARDEN FARM"
CHIPLEY, FLORIDA

Ocean Springs Pecan Nursery

Season 1915-16

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

15,000 PECAN TREES

In desirable grades and
Standard Varieties. Healthy,
well grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. Lott Co.

Waycross, Georgia

nourishment as one used for pasture. In the next century nuts will largely, if not entirely, take the place of meats on the bill of fare and the pecan will assume its rightful place at the head of the list of nourishing and digestible foodstuffs."

BOOKS AND CATALOGS

Nurserymen's Knives; catalog and price list of Maher & Grost Cutlery Co., Toledo, O.

Pecan Planters' Practical Pointers; sixth edition; 8 pages; Bechtel's Pecan Nurseries, Ocean Springs, Miss.

Griffing's 1916 Price List of Home Grown Trees; 24 pages; Griffing's Grand Bay Nurseries, Grand Bay, Ala.

The Colorado Industrial Plan; by John D. Rockefeller, Jr., 26 Broadway, New York City. 100 pages bearing on industrial affairs.

Wood's High Grade Seeds; 1916 descriptive catalog and price list of farm and garden seeds; 100 illustrated pages; T. W. Wood & Son, Richmond, Va.

Pecan Culture With Special Reference to Propagation and Varieties; Farmers Bulletin No. 700; by C. A. Reed; 32 pages; Bureau of Plant Industry, Washington D. C.

Du Pont's High Grade Explosives; second edition; 24 pages, describing kinds, grades and brands manufactured by E. I. Du Pont de Nemours & Co., Wilmington, Del.

Sources of Fertility and Their Conservation: an address by W. H. Bowker; 20 pages; published by the Soil Improvement Committee of the National Fertilizer Association, Chicago.

Farmers Bulletin No. 783: Suggestions for Parcel Post Marketing: a 20 page contribution from the Office of Markets and Rural Organizations, Department of Agriculture, Washington, D. C.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XV

March 1916

Number 3



THE secret of thrift is knowledge. The more you know the more you can save yourself and that which belongs to you and can do more work with less effort. Knowledge of domestic economy saves income; knowledge of sanitary laws saves health and life; knowledge of the laws of intellect saves wear and tear of brain, and knowledge of the laws of the spirit—what does it not save?—CHARLES KINGSLEY.

10c per Copy

\$1.00 per Year

KEYSTONE Pecan Orchard Co.

Producers and Exporters of fine
PAPER SHELL PECANS

OFFICES:

1 Broadway, New York, N.Y.
Times Building, Florence, S.C.
Groves: Baconton, Ga.

VARIETIES:

Schley, Van Deman, Frottscher, Stuart

We expect to have approximately five tons of high grade paper shell pecans from our 1915 crop. Varieties: Schley, Van Deman and Stuart. Offers solicited or prices quoted on application.

The W. B. Dukes Pecan Farm Moultrie, Georgia

Growers and
Shippers of

FANCY PAPER SHELL PECANS

One million grafts and buds of Schley Stuart, Delmas and Moneymaker. Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

PRUNING TO CONTROL PE- CAN DIE-BACK

If pruning for die-back in pecans is delayed until the trees shed their leaves, much of the dead and diseased wood will be overlooked. The University of Florida Experiment Station Bulletin suggests that the affected branches and twigs be burned in the fall. This will not only work toward controlling die-back, but it will eliminate many other fungous and insect diseases which dead wood harbors. Cut well into the healthy wood and where the branches are taken off trim close to the main branches so that no dead stubs will be left and so that healing will be facilitated. Paint the larger wounds with bordeaux paste or some other disinfectant that will prevent drying out or the entrance of disease until the wound closes.

Die-back can be recognized by the characteristic dying of the twigs from the tips backward. Young twigs are marked with dark brown areas. Toward the base of the twig, the bark sometimes looks water-soaked or waxy. Bark of older limbs affected is dry, sunken and the spots are darker. Shoots often appear below the diseased portion and give an appearance of rosette. This abnormal growth is probably an attempt of the tree to recover from the attack of the disease, since the leaves do not show the characteristics peculiar to rosette.

ITEMS OF INTEREST

Importations of walnuts during 1914 amounted to 30,247,551 pounds; in 1915 to 35,073,347 pounds.

Almonds imported during the year ending December 31, 1914, amounted to 14,868,426 pounds. One year later the amount had increased to 16,305,039 pounds.

The Western Walnut Association will hold its second annual
(Continued on page 43)

Quality Trees

Pecans

Satsumas

General line of Hardy Citrus Trees

Every shipment
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Your patronage
will prove it

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Florida Nurseries

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Chestnuts, Persimmons and
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THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., MARCH, 1916

NUMBER 3

THE PECAN

T is only within the past few years, comparatively speaking, that a most wonderful change has taken place in pecan culture, the successful propagation of selected varieties having revolutionized the business. While the common seedling pecan is ordinarily a fine, palatable and highly nutritious nut, the improved or selected varieties are infinitely superior in size, thinness of shell, flavor and cracking quality, with more regular and abundant bearing.

A High Priced Luxury

These improved nuts are a luxury, and thus far the high price at which they readily sell confines them to a limited market. The time is fast coming when this luxury will become a staple food product with an enormously increased consumption. Nut kernels, in general, and pecan meats in particular, afford a combination of important food elements in a highly concentrated form, and they need only to be properly used to serve a most useful economic and dietetic purpose. This is significant in giving value to the pecan as a farm crop. A few trees or a small orchard will beautify and add to the value of any home or farm in the limited southern belt of country where this nut is grown to perfection.

A Top-Notcher

We speak of the pecan being a horticultural "top-notch" because there is no plant, tree or agricultural product that yields more pleasure and profit in proportion to the cost than does the fine varieties of pecans when given proper care and necessary attention.

A Beautiful Tree

A pecan tree is a permanent addition to the property on which it stands, is beautiful and ornamental, and lives to a great age, bearing regular and abundant crops.

The commercial and industrial operations which cluster around the pecan are varied and extensive and reach all the way from growing the trees to marketing the nuts. However, it is from the viewpoint of an investment that we shall treat the subject here.

In the entire category of stocks, bonds, mort-

gages, etc., there is nothing that adapts itself to a greater variety of conditions and circumstances as a security than does the pecan. It is available for the resident or the non-resident capitalist, to the large or small investor, in offering a safe, profitable and permanent use for capital.

Treating this statement in some detail, it may be truthfully said that the investment is a permanent one because the pecan tree lives to a great age, and the oldest known trees continue producing nuts as long as they produce leaves. As judged by the number of concentric rings counted in the transverse section of the trunk, the age of six hundred years has been satisfactorily established for some trees. The pecan withstands heat and cold, floods and protracted drouths, goes on bearing after being struck by lightning, as has been shown in some cases, and can even be successfully replaced when up-rooted by storms. Plant diseases and insects which affect it are comparatively few and easily controlled. Should the tree be destroyed by fire or the woodsman's ax, it will sprout from the stump and make a new tree. If dug up bodily, portions of the roots left in the ground are likely to start into growth and make several trees in the place of the one removed. Anything in plant life that can survive all of these vicissitudes and continue to perform its ordained functions, may surely, from a human viewpoint, be regarded as permanent.

Industrial and Commercial Operations

The arguments in support of the permanence of pecan investments favor our claim as to its safety. When judiciously made, we say it is safe because the accidents and changing conditions which frequently depreciate the value of industrial stocks, bonds and other securities, do not apply to a pecan orchard. Banks may break, gold mines may play out, fires may destroy or floods devastate, while a pecan tree will go right on producing a delicious food for the posterity of the wise man who planted it. This is not all. Thieves cannot steal a pecan orchard; it cannot be squandered by a dishonest employee; it will not run away, and if properly treated rarely goes on a strike. All

this should prove our case, but more evidence is available in the fact that a pecan tree or orchard increases in value as the years go by, while the reverse is true of nearly all other investments. An automobile or a Ford wears out in a few months and is expensive to keep in repairs and to operate. In manufacturing lines there is a constant depreciation in the value of the plant, with overhead charges going on regularly should the plant become idle. Buildings begin to decay as soon as constructed and last only for two or three generations. On the other hand, the pecan orchard does not need constant repairs, does not depreciate in value and costs little for maintenance. The product is not quickly perishable and can be marketed at leisure. It is easily harvested and does not require expensive or bulky shipping conveniences. Even the freight charges are but a small percentage of the selling price, as the pecan is literally a case of "valuable goods put up in small packages."

Safe, Profitable and Permanent

We have already used so much of our allotted space that the task of proving the profitableness of the pecan must be condensed into a brief summary of well established reports and careful observations. The ordinary market value of the seedling pecan is about ten cents a pound, although the consumer usually pays twice that amount. During the season of 1914 the crop of the standard or improved varieties averaged close to fifty cents a pound and ranged from 30 to 80 cents, owing to variety and varying conditions. At this writing, the 1915 crop bids fair to make a higher record as to the price, while the demand shows a marked increase. The importations of nuts into the United States for several years past demonstrate the rapid increase in the demand for nuts.

The pecan is the best edible nut grown in this or any other country, and it can be grown commercially only in a circumscribed belt of the southern United States.

Orchard statistics show an average production of twenty-five pounds per tree for the orchard at ten years from planting. Individual trees of the same age frequently yield one hundred pounds or more in a single season. A record tree in South Georgia produced 352 pounds in one crop when seventeen years old. These nuts sold at forty cents a pound. A thirty-five year old seedling in west Florida bore 965 pounds in 1914. A four acre orchard in southeast Georgia produced nuts in 1914 which sold for one thousand dollars, and about half the trees in this orchard were such shy bearers that they are now being top-worked to better varieties

Ordinarily twenty trees are planted to the

acre. With a proper selection of varieties, good trees and good care, an orchard at ten years should produce one thousand pounds of first-class nuts. Five years later, double that amount should be harvested, while the maximum yield will be due when the trees reach forty years of age.

Fix your own price at which the nuts may sell in future years and see if it will not be a paying business, even supposing that each acre costs you as much as four hundred dollars. If your orchard produces twenty pounds per tree at ten years and the selling price is as low as twenty cents per pound it would show a profit of 20 per cent for that year. Is this profitable? If so, what would fifty pounds per tree at forty cents per pound mean? Simply this: That you get your money back from one crop and have the orchard left to repeat the stunt for an indefinite, but long period. Is this some better than 4 per cent dividends? Is it a good thing, or is it not? Where is the rub? It needs simply the combination of capital and business tact directed by honest and capable horticultural experience and a willingness to await the growth of trees to profitable bearing age. Without such an equipment, mistakes, failures and fraud are incident to pecan culture, just as to any new and widely advertised enterprise. When the investor can join hands with men who can develop such orchards as we know can be established, there is every assurance that the returns will in due time far exceed that ordinarily received by investors. By "due time" we mean approximately seven years from the date of planting, for what may be called dividends on the investment, although a sprinkling of nuts are often gathered the third year. A farmer who planted a few trees in southeast Georgia in March, 1913 gathered a handful of matured nuts early in November, 1915. Thus his trees actually came into bearing in thirty months.

Be sure you start right, that you get a square deal and then stick to it. Then if your money is properly used you can afford to await the growth of trees for the profits, which as the years go by will amply repay for the seeming delay. During this period of waiting, however, the orchard is steadily and rapidly enhancing in value, in fact to such an extent that its sale before bearing age becomes a profitable venture.

BREEDING CHESTNUTS FOR DISEASE CONTROL

How to checkmate the new chestnut blight or bark disease that is causing such vast destruction is a problem of no small importance. From its obscure beginnings in eastern New York about twelve years ago, it has swept into nineteen states

and now affects about all of the northern half of our native chestnut stands, doing damage estimated at close upon \$50,000,000. It attacks the trees in twig, branch and trunk, causing death in a year or two, and soon recurs in the sprouts or suckers sent up from the still living roots. No native chestnut appears to be spared in the long run, but the little eastern bush chinkapin, with its smoother bark and comparative freedom from insect enemies, appears less readily attacked. The European chestnut in its favorite varieties, is also subject to the disease, but when we come to the chestnuts of Japan and China we find very great resistance, amounting in some varieties to almost practical immunity. There appears to be now no method of controlling this disease, which is caused by a fungus whose spores are carried about by birds and insects, creating new infections wherever they reach the sap wood or inner bark of the chestnut tree. There is no apparent diminution of its virulence since it came under observation.

The most obvious means of replacing the great losses of chestnut timber and nuts would seem to lie in the substitution for our native forms of the Asiatic species that best resist the disease, having evidently for ages been accustomed to its presence, and also to breed the chestnut as a valuable genus of forest trees, by hybridization and selection for the avowed production of varieties better adapted to our purposes.

Some chestnut breeding has already been accomplished in various parts of our country, and generally with good results. A promising experiment of this character has been under the direction of the Office of Pathology of the United States Department of Agriculture for several years.

Hybrids between the highly resistant Japan chestnut and our native chinkapin have been raised in considerable numbers, quickly forming handsome dwarf trees, bearing at an early age profuse crops of nuts of excellent quality, five or six times the size of those of the wild chinkapin parent, and ripening weeks before any other chestnuts. So far these trees show a very high degree of disease resistance. The second generation of hybrids, grown from chance or self-pollinated nuts appear quite as good as their parents, which is an important feature when the cost of propagation of nut trees by budding and grafting is considered. Another line of breeding lies in the inter-crossing of disease resisting Japan and Chinese varieties that are rapidly being imported into this country by the Office of Foreign Seed and Plant Introduction, and selection of the best resulting forms. Four generations of cross-bred Japan chestnuts

of a very early bearing type, producing nuts when two or three years old, have already been grown and the varietal characters appear to be well fixed. Some of the Chinese chestnuts are said to grow nearly one hundred feet high in their home forests, and it may be possible by their use to replace in some measure our vanishing native chestnut stands, and perhaps develop very superior varieties during the process of acclimatization.

The hybrid chinkapins and cross-bred chestnuts referred to in this article are not yet available to the public for testing, since they are being held for further observations as to their varietal character and their degree of disease resistance.

SHADE

The kindest thing God ever made,
His hand of very healing laid
Upon a fevered world, is shade.

His glorious company of trees
Throw out their mantles and on these
The dust-stained wanderer finds ease.

Green temples, closed against the beat
Of noontimes' blinding glare and heat,
Open to any pilgrim's feet.

The white road blisters in the sun;
Now, half the weary journey done,
Enter and rest, O weary one!

And feel the dew of dawn still wet
Beneath thy feet, and so forget
The burning highway's ache and fret.

This is God's hospitality,
And whoso rests beneath a tree
Hath cause to thank Him gratefully.

—Theodosia Garrison in Everybody's.

We should find food for reflection in the fact that the United States imports annually several times as many edible nuts as are now being produced in the country. Couple this present condition with the knowledge that climate, soil and all necessary conditions for nut growing abound here and it forces conclusions which, if crystalized into well-directed action, means an enormous increase in the planting of nut trees. This is just what The Nut-Grower has been advocating publicly and privately for the past fifteen years.

At the famous Battle Creek Sanitarium nuts and nut preparations are used exclusively in the place of meats, fish and fowls.

The Nut-Grower

Published monthly by The Nut-Grower Company

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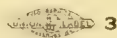
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Forms close on 20th of month preceding date of publication.



3

Orchard plantings during the season just closing have been important though they have been different in some respects from those of previous years. In the aggregate, the acreage is probably larger than in previous years, but it has been distributed in smaller plantings and in new sections.

The importations of filberts into this country amount to about twelve million pounds a year. The home production of the excellent nut is too small to count. Because the English filbert plant is subject to blight in this country is no reason why our hardy native hazel nuts should not be extensively grown.

The preference in varieties of pecans, as evidenced at the Hardaway packing plant when the convention visited it last fall, reflects the opinion of Mr. H. C. White, the horticulturist for the planting companies. Schley was the leading nut, while only four others were generally planted. These are Stuart, Van Deman, Alley and Delmas.

Jacksonville promises to be an attractive meeting place for the 1916 convention of the National Nut Growers Association. Tentative work is already under way, looking to the organization of arrangements which will prove interesting to the many people who will be attracted by that occasion.

New orchard movements are under way which

aim at overcoming some of the handicaps which former investors encountered, while a better appreciation of the cost of properly caring for orchards is showing that the high prices charged by development companies are not extortionate, providing that the trees thus sold have been given a square deal.

Both almonds and walnuts in California turned out larger crops last year than in any other previous season. The 1914 production of these nuts in that state was comparatively small. The enlarged crop moved out promptly at conservative prices. The increased tonnage of almonds was largely due to the increased area coming into bearing. In quality these nuts both proved to be fairly satisfactory, although they are quite susceptible to weather conditions.

The climate at St. Petersburg, Fla., is said to make the land in that section worth one thousand dollars an acre. This might suggest that other southern points which have an all-the-year climate as desirable as this Florida city has in the winter and where the soil also has potential value of like amount might capitalize their advantages by a systematic and judicious advertising campaign.

The editor's trial grounds now have some nut trees kindly sent by the Storr & Harrison Co., of Painesville, O. Two varieties of hazel nuts, and two trees each of white and black walnuts were among the lot. These trees, coming from the state where the editor once roamed the woods, gathering walnuts and hickories, call up recollections of boyhood days. We feel sure that the success achieved by the pecan growers of the south can be duplicated with other nuts in the north, by using such native varieties as the climatic conditions may favor.

Food is the basis of human existence. Nuts afford the highest grade food known to practical science. They are universally relished because they are wholesome, healthful and strengthening. As they are remarkably free from objectionable features, such a product must necessarily become of increasing commercial importance. Then the pecan is the par excellent nut. This is the reason why nuts, and especially the pecan, should be planted largely. This is also the reason why the brightest and most progressive minds are the first to recognize the importance of commercial pecan growing.

THERE ARE NO CLAY HILLS IN DIXIE

Finer than those in the Cottage Hill, Fla., district, where our nurseries and groves are located.

Our pecan stock is absolutely great and if you are in the market, be sure to let us figure with you.

We are bringing in a large number of the celebrated Brewton (blight proof) pear, and will either quote you stock in any size, or contract to bud for you as many as you like. An orchard of Brewton pears is a sure and big winner.

We develop pecan tracts under a 5 year installment agreement, the prices and terms of which cannot be beaten.

Also develop combination groves, using either peaches, satsumas or grape fruit as fillers between pecans.

About 20 five acre tracts still available.

Write Us

THE PENSACOLA SEED & NURSERY CO.

Cottage Hill, Florida



WITH THE EDITOR AND HIS CORRESPONDENTS

THE ECONOMY OF THE PECAN

Editor Nut-Grower:

While the pecan is capable of and can be made to yield the largest amount of money per acre than any other crop, yet it is the most economic crop in another important way that can possibly be grown, which I will explain below. I wish first to give some well authenticated yields of nuts and big prices obtained from a single tree. The largest was 1300 pounds, or 32½ bushels; the next 900 pounds or 22½ bushels and the third was 800 pounds or 20 bushels. All these trees are native Texans, growing wild on the Brazos, Colorado and Lampasas rivers, respectively. The largest sum of money from an annual sale of a single tree was \$315, in Mississippi. The next was \$300 from a tree in Louisiana. The third was \$250 from a Texas tree. Yet the Texas tree was the best and the other fellows just beat the Texan in getting a higher price for the tree product. The pounds of nuts that sold at \$2 per pound and the top was literally cut away for buds. The Louisiana tree yielded the same amount of nuts, which sold for \$3 per pound, but sold no buds. The Texas tree bore 20 pounds of nuts that sold at \$1 per pound, and the tree was trimmed and the waste limbs brought \$50 more. Had the nuts from the Texas

tree sold for as good a price as those of the Louisiana tree brought, the annual product of this tree would have been \$650. I own the Texas tree and this sale was made in 1904. But these yields and sales are the exception and not the rule.

However, I did see in 1904 a ten acre block of pecans, and the trees were planted so far apart that only ten trees stood on an acre. The trees were 9 years old and the crop had been gathered and sold at 20 cents per pound wholesale and averaged \$10 per tree or \$100 per acre. The owner had mowed and sold three crops of hay off the same land from Bermuda grass and clover grown together for \$30 more per acre. This was in the Mississippi river bottom across from New Orleans. This last achievement is within the reach of everyone who owns pecan land.

Now what I mean by the economy of the pecan is that the tree will take less of the earth's surface to grow high priced food products than any other plant or tree in the world. I never see a pecan tree, with its branches high in air, laden with all the richest of food products craved by animal life, from the tiniest ant to the elephant, but what I am forcibly reminded of a sky-scraper in a city where land has become so valuable that owners of lots are compelled to build towards the sky to get room. The surface of the earth is becoming more valuable every year and by another century every acre of land in all densely populated countries will be used for the human race to live upon and raise domestic animals.

There is no tree that lives longer, that bears fruit, and towers beyond the reach of domestic animals like the pecan after a few years' growth. In the meantime, before this growth is attained, annual crops can be raised on the same land with the pecan to



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DOUBLE SERVICE
Automobile Tires
Guaranteed 7,000 Miles Service
Absolutely Punctureproof

Double Service Tires are made double the thickness of the best standard make tires.

This 19% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough

fabric and one inch surface tread rubber makes these tires absolutely puncture proof.

These tires excel all others for use in the country over rough and rutted roads as well as on hard pavements. They are easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires are badly needed or and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service.

Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

PRICES

Tires Tubes		Tires Tubes	
20x3 in.	\$ 8.60 \$2.30	36x4 in.	\$17.45 \$4.65
20x3½ in.	10.85 3.10	36x4½ in.	21.29 5.60
22x3½ in.	12.75 3.20	38x4½ in.	22.60 6.75
24x4 in.	15.75 4.20	38x4½ in.	23.60 6.20
24x4 in.	16.70 4.35	38x5 in.	26.30 6.60

All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only.

Describe folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



THE NUT-GROWER

great advantage. The pecan is a deep feeder, and smaller vegetation will grow closer to a pecan than any other tree. The Bermuda and Rescue grasses will both grow under a pecan tree, and planted together will make a perpetual pasture. Even people in the crowded towns can raise pecans up in the air on their lawns.

To grow pecans produces wealth; to eat pecans induces health; if health and wealth are both desired, no surer way are both acquired.

H. A. HALBERT.
Coleman, Tex.

A HANDY REPRINT

Editor Nut-Grower:

It appears to me that there should be a wide distribution of those small pecan "Food" leaflets which contain the most interesting letter to me from Dr. J. H. Kellogg, of the famous Battle Creek Sanitarium at Battle Creek, Mich. This letter sets out in striking text the tremendously high food merits of the pecan and its adaptability in the place of meats on the bill of fare.

If this leaflet were distributed broadcast it would certainly increase the consumption of the pecan, and this is the one thing most needful today. It has been estimated by one of our best orchardists that probably not one person in ten thousand has ever seen or even heard of the large thin shelled nuts; and in order to create as great consumption as possible it is imperative that not only its existence but its pre-eminent qualities be advertised by every person interested in pecan culture.

As for myself, I strive to be a

STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right.
Chas. Crossland, Bennetsville, S. C.

live wire in the business, and I think that every one interested in the industry should do whatever he or she might toward the distribution and sale of the pecan nut. This leaflet is a small one of scant four pages, is inexpensive, weighs little or nothing and makes an admirable enclosure for any one's correspondence. The name, address and business of anyone may be printed on the front or cover page in place of my name, thus affording valuable individual advertising.

Orders for these may be mailed direct to you, and I trust you will give the lowest quotation, as I do not want any "rake-off" from the printing of them.

The Nut-Grower has ever been in the lead in promotion and progressive advertising of the pecan as you are keenly appreciative of the fact that wide advertising means increased sale and consumption of this king of nuts. And larger sales and consumption is necessary to take care of the increasing volume of pecan nuts and thereby to make the industry profitable.

WM. P. BULLARD.
Albany, Ga.

[The leaflet to which Mr. Bullard refers appeared in the January number of The Nut-Grower under the title, Pecans—their Food Value. This article has been reprinted in leaflet form. We will be glad to send samples and prices on request.—Editor.]

THE WIGHT FROTSCHER

Editor Nut-Grower:

I note what you say in the last Nut Grower about my record Frotscher tree being crowded. A year ago I cut down the Centennial tree in accordance with your suggestion, and the Frotscher now has plenty of room. Am expecting a good crop from it this year.

J. B. WIGHT.
Cairo, Ga.

Budded Pecan Trees Our Specialty...

We grow the old standard varieties—Stuart, Frotscher and Schley. None better. Lowest prices. 400 acres in groves, 2 to five years old for sale. Come to see or write

TUCK BROTHERS

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BUDED AND GRAFTED ENGLISH WALNUT

and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over

your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES
THE NUT SPECIALIST
Lancaster, Pa.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall

Get Our Special Prices

We have other varieties and a stock of 15,000 Satsuma orange trees for sale. Write Us.

The Paper Shell Pecan Nursery, Ltd.

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Expert Propagation.
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Our Specialty is
growing wellrooted
budded and grafted trees of
best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia



A TWO-YEAR OLD BEAUTY

A TWO-YEAR OLD PECAN TREE

The illustration on this page shows what can be accomplished in the way of tree growth when proper care and cultivation are given. The tree shown is owned by T. H. Parker of Moultrie, Ga., who has the following to say of it:

"The tree was two years of age and eight feet high at the time it was transplanted from the nursery. Preparatory to the transplanting of the tree, I took a 1¼ inch auger to which had been

welded a shank five feet long, and bored a hole in the ground at the point where the tree is set. I then pushed a half pound of Red Cross dynamite to the bottom of the hole; then set off the charge and the result was that the ground was pulverized in a spot eight to ten feet in diameter. I then dug a hole four feet deep and four feet in diameter, throwing the top soil in one pile and the clay in another. To refill the hole, I used nothing but top soil, which was obtained a little dis-

tance from the hole. It was heavily fertilized the first and second springs after setting. The picture was made after two years of growth, and the tree had nine nuts on it when the picture was made.

"When the ground is dry, I invariably use dynamite in setting pecan trees. Too often there is but slight attention given to planting trees. Too frequently the work is done as rapidly as possible and without consideration of the future welfare and growth of the trees. A little additional time and cost spent in careful and intelligent preparation of the soil is time and money well spent, which will be abundantly repaid in the later development and growth of the trees."

Dr. W. C. Deming, secretary of the Northern Nut Growers Association, says: "There is no more peace and satisfaction giving occupation than that of horticulture, and no more fascinating

FOR SALE

For Sale—Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. C. W. RANSOM, Houston, Tex. 7-8

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

For Sale—A thousand pounds of medium sized, fine quality, thin shelled Louisiana pecans. Offered in bulk or small lots to suit purchasers. Attractive price. W. M. ELLISON, Lafayette, La. t

WANTED

Wanted—Middle aged man with family, that understands propagating pecans. References exchanged. DON G. OWENS, Gerald, Miss.

G. H. Tomlinson
N U R S E R Y M A N

Putney, Ga.

Everything Suited to the South

THE NUT-GROWER

branch of horticulture than nut growing."

PECAN SLOGAN CONTEST

We invite our readers to participate in a contest for a suitable slogan for general use, showing the merits, attractions and value of the pecan. As entries are made by letter, they will be printed in our columns. With the August, 1916, issue the contest will close and the voting will begin and continue until our October issue goes to press, when the result will be announced. Any subscriber can suggest a slogan and any one whose name is on our books will be entitled to one vote for first choice and one vote for second choice of the slogans suggested.

1. For permanent pleasure and plenteous profits plant pecans.
2. Pecans n you will eat
And less of bread and meat,
A happy life complete,
No doctor's bills to meet.
- 3 To grow pecans produces wealth;
To eat pecans induces health;
- 4 To grow pecans produces wealth;
To eat pecans induces health;
If health and wealth are both desired,
No surer way are both acquired,
5. Pecan—
Earth's
Choicest
Appetizing
Nut.

A TYPICAL AMERICAN TREE

Our hickory is a most American tree, as typical of our republic as the wild turkey among our birds or the bison among our animals. They have nothing like the hickory in Europe; no tree that combines so many fine lumber qualities as well as producing a nut finer in flavor than any imported variety whatsoever.

It is one of those distinctively American things, unique in its excellence, not to be matched

ROOD PECAN GROVES

Albany, Ga.

Pecan Trees, Pecan Nuts, English Walnut Trees

Write for Prices . . .

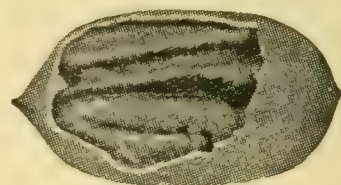
C. M. Rood, President



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Largest Plant Growers in the State.



The Pecan Business

In a concise booklet—FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.

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Atlantic Coast Line

"The Standard Railroad of the South"

SEE A. C. L. TICKET AGENTS REGARDING WINTER TOURIST FARES, SCHEDULES, ETC., TO THE VARIOUS WINTER RESORTS. :: ::

Passenger Service Unexcelled

Blast Holes for Trees, Get Sturdy Roots

Trees planted in blasted holes developed deeper and stronger root systems than those in spade-dug holes, the N. J. Experiment Station found. Trees in blasted beds bear two years earlier.

Atlas Farm Powder THE SAFEST EXPLOSIVE The Original Farm Powder

is easy to use for digging ditches, clearing land of stumps and boulders, subsoiling, etc. Just punch a hole, load, light a fuse and the work is done. Write for our free book, "Better Farming." It tells how to make more money by using Atlas Farm Powder—the cheapest farm hand.

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Royal Palm Nurseries

Complete assortment of trees, plants, shrubs, etc., for orchards, groves, home grounds, offices and stores at moderate prices. We will tell you how to make them grow. Write for free catalog and special inquiry blank.

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Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

Catalogue for the asking

P. J. Berckmans Co.,
FRUITLAND NURSERIES
Augusta, Ga.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

Grafted Pecan Trees of Select Papershell Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery
C. FORKERT, Proprietor

OCEAN SPRINGS, MISSISSIPPI

When writing to advertisers please mention The Nut-Grower.

elsewhere—a leaf of hickory ought to find its place on our national escutcheon! Like the turkey and the bison, the hickory has been little appreciated by us as a nation and it has been allowed to go almost to the vanishing point. The hickory bark borer destroys hundreds of thousands of wild trees every year now that the birds are so scarce; no young trees are coming up to take the place of those that we have; and no attempt is being made to raise hickories on a large scale, either in orchard or in forest. On the farm the hickory is appreciated to the point of leaving a fine one standing when clearing a field, partly as a shade tree for cows, partly because a good one can be depended upon for about two bushels of nuts every seed year.

The wood commands about twice the price of white pine, \$30 at the mill per thousand, and we use about 350 million feet of it a year, a rate of cutting that plays havoc with the very existence of the tree in the wild forests. The estate owner has a big field ahead of him in the study and growing of this tree (the shagbark being the one understood by the general term "hickory"), yet the only one actually orcharded on a large scale is the southern hickory or pecan. There is no reason why shagbark hickory can not be grown, either in forest or in orchard, the former for lumber and nut crops, the latter for nuts only—either way it would be a paying proposition. The shagbark is a tree to plant and encourage wherever a moist, loamy bottom of granite, limestone or clay base exists. It does not do well in sand base soils. Nurseries seldom offer young hickories, as they are exceedingly difficult to transplant, and wild stock, gathered no matter how young, is nearly certain to die. The way to set a tree in a given locality then, is to plant one or two sound healthy nuts and save the vigor-

ous seedling. Also, wherever nature has already started a young hickory, to clear away the overgrowth and give it all the encouragement possible.

We have a number of species of hickory, but four of them will be enough to know and identify. The shagbark is known at once by its long, hard, whitish gray bark scales, warping off at both top and bottom from the trunk. Young specimens are not so easy to be sure of, but look for a center leaflet very large, two nearly as large on each side of it, and two little ones behind that, and your identification is reasonably certain. Occasionally they have a seven leaflet leaf, but as a rule this number belongs to its cousin the mockernut. The shagbark is a stately tree in any forest and one can hardly have too many of them. They cannot be grown in pure sand, however, for the drain they make on the vitality of the soil is very great, almost as great as with the ash tree.

In the autumn the shagbark leaf goes right to a russet brown and is soon down, so that it cannot be depended upon much in the autumn color scheme. The wood, like that of all the hickories, is tough, springy and heavy; salable at high prices for all sorts of tool handles and carriage work; not durable in the ground. The nuts bring \$2 a bushel in the open market, so that the biannual yield from each tree runs over \$12.

(Continued next month)

ITEMS OF INTEREST

(Continued from page 34)

meeting at North Yakima, Wash., November 1-3, 1916. Mr. J. C. Cooper, of McMinnville, Ore., is president of the organization.

The re-organized business of the Griffing Bros. Co., of Jacksonville, and Macclenny, Fla., is now known as the Inter-State Nurseries, C. M. Griffing & Co., proprietors. The business will

be conducted on a broad and liberal policy. This new firm will not take over the citrus business of its predecessor.

The market for California almonds, up to the present time, has been confined to the demand in the United States. The annual consumption of these nuts in America amounts to about 6,000 tons in the shell and about 5,000 tons of shelled goods. Or, expressing the shelled in terms of the unshelled, we find the consumption to be about 16,000 tons annually.

INTEREST IN NUTS IN MISSOURI

J. C. Whitten, Missouri College of Agriculture.

The Department of Horticulture of the University of Missouri is receiving a large number of inquiries as to what species of nuts are profitable in Missouri and what varieties to plant for profit.

The pecan is the most valuable nut grown in Missouri. It grows best on deep, rich soils, such as high bottom lands, but does very well, however, on any soil that will produce a fair corn crop.

The productive pecan groves of the state at present consist almost altogether of native trees that have been saved on the farm when the land was cleared.

Some growers who have groves of mature pecan trees on their farms are selling annually anywhere from a few hundred up to ten or fifteen hundred dollars worth of pecans a year. This shows the desirability of saving good productive native trees where they are already growing.

At the Experiment Station we have tried most of the large, early bearing paper shell varieties of pecans which are grown in the Gulf States. None of these have as yet proven hardy in Central Missouri and it is probably unsafe to recommend them for

planting anywhere in this state.

It is probably best for those who want to grow pecan trees to plant nuts from those native trees in the neighborhood that are producing the most profitable crops as the trees come into bearing.

The pecan comes into bearing late ordinarily. The seedling trees in the Experiment Station grounds at Columbia are just beginning to come into bearing at twenty years of age, so little has been done in the state in artificial

nut planting that no one can say just how profitable the planting of pecan groves will be or at just what age profitable bearing will begin.

There are, however, a good many irregular fringes of bottom land along streams or toward the foot of irregular cliffs which are not suitable for clearing and putting into general farm crops. There is no reason why such areas as these might not be planted to nut trees instead of being allowed to produce worthless

Don't Pot Your Trees



Drawn from actual photo. —Note marked difference in growth between tree planted in blasted hole and tree planted in spade-dug hole.

Practical Proofs

E. J. BARBER, Beech Bluff, Tenn., says: "I would not set trees without first subsoiling with explosives, even if it cost four times the amount."

J. C. SAYLOR, Penna., says: "Blasted trees the finest in the orchard."

O. C. LANGFIELD, Calif., says: "Planted 14,000 trees with dynamite—advanced value of land from \$15 to \$200 per acre in less than a year."

Spade-dug holes, like pots, confine and cramp the roots. Set your trees out in blasted holes. Stop the big percentage of early losses. Make them grow sturdy, hearty and fast. Cash in on your investment quicker by getting earlier yields.



Red Cross Farm Powder

lightens labor and increases profits. It loosens the earth, makes better rootage and provides increased nourishment for young trees. It rejuvenates old trees and makes them bear.

GET THIS BIG BOOK FREE

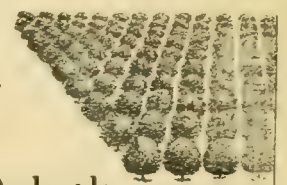
Describes the use of Red Cross Farm Powder for tree planting, land clearing, subsoiling, ditching and many other things. Tells what this modern method has done for hundreds of orchardists and farmers. Write to-day for this interesting 188-page

Handbook of Explosives No. 325

E. I. du Pont de Nemours & Co. Wilmington, Delaware



Fine Pecan Trees



And Fine Orchards

Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties. Our system of growing, digging and handling pecan trees insures success. Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries

C.M. Griffing & Company
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Nursery Stock That Excels

Write us for catalogue and information about Pecans, Citrus,
General Nursery Stock, Ornamentals and Roses.

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Ocala, Florida

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A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

G. E. Pleas Plant Co.

"GLEN ARDEN FARM"
CHIPLEY, FLORIDA

scrubby growth of other species.

It pays also to save black walnut trees on the place where scattering specimens are needed for shade in pastures or along roadways or in rough land not especially valuable for other purposes. Black walnut lumber is one of the most valuable woods. The nuts usually bring approximately 50 cents a bushel on the market. The demand for them is greatly increasing now that it has been found that they keep indefinitely in cold storage.

If nuts are to be planted the following spring, they ought to be gathered this fall and frozen over winter out of doors, mixed with moist soil in a box where they will drain. They should be planted in early spring before they have sprouted. This freezing fits them for prompt germination.

NUT RECIPES

Pecan Fudge

Put two cups sugar, two-thirds cup milk, one square chocolate and one tablespoon butter into a saucepan, heat slowly and stir constantly until the chocolate is melted. Boil until it will hold together in cold water. Remove from the fire and add one teaspoon of vanilla and stir until creamy. When it begins to sugar slightly around the sides stir in one large cup of chopped pecan kernels and pour quickly into a buttered pan. When cool mark off in squares.

Pecan Salad

Stir well together one cup of finely chopped pecan kernels and three good sized grated apples. Over this pour a salad dressing made as follows: Beat together two eggs, two tablespoons sugar and one-half cup vinegar; set on stove and cook until thick. Pour over the salad while hot.

Potato and Nut Loaf

Chop a cupful of nut meats and put them into a bowl. Add a cup-

ful of very fine white bread crumbs, a cupful of hot mashed potatoes, a tablespoon of flour and about half a cupful of milk. Stir together to mix thoroughly and put into a mold that has been well buttered and sprinkled with fine crumbs. Put the mold into a hot oven to bake for 35 minutes. When ready to serve, invert the mold on a hot serving dish and let it rest for a few moments. Lift the mold off carefully, pour a little cream sauce around the loaf and send to the table with the rest of the sauce in a bowl.

To make the cream sauce, put a tablespoon each of butter and flour in a suitable saucepan on the stove. Stir and cook a little. Then add a generous cupful of boiling milk. Stir until it is smooth and boiling.

Nut Chops

Two tablespoons peanut butter, six tablespoons cream, one egg and cracker crumbs, six slices of bread. Trim all crusts off the bread; spread the bread with peanut butter; cut into three oblong pieces; beat the egg and add the cream; dip the bread into the egg and cream, then into the cracker crumbs. Place in an oiled pan and bake in oven till brown.

Rice and Nuts

One-half cupful rice, one-half cupful pecan meats, a little onion, one cupful white sauce, bread crumbs. Boil rice and drain; add the rest of the ingredients; put in baking dish, cover with crumbs and bake until brown.

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, road. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversit yof crops grown in South Georgia as well

THE NUT-GROWER



WHY DO

THE LEADING PLANTERS AND NURSERYMEN
RECOMMEND TREES GROWN BY

SIMPSON NURSERY COMPANY?

Because we have always delivered trees as ordered, at the time wanted, and packed them so that they arrived in better condition than is usually expected, and the result is that our

TREES GROW

For years past we have shipped more pecan trees than any other nurseryman. At least one third of the pecan acreage in the Albany district is planted with trees grown by us.

Our trees are exceptionally fine this year and we know they will please you. Will be glad to quote you on all standard varieties. Your order will receive our personal attention.

Simpson Nursery Company
MONTICELLO, FLORIDA



Established by G. M. Bacon 1889

Incorporated 1903

Most desirable Standard Varieties only

Budded and Grafted

PECAN TREES

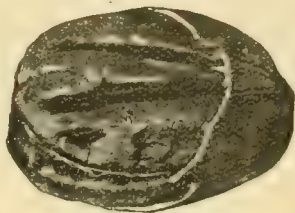
Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

Send for new catalog and price list

The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

Pecan Trees

Satsuma Oranges

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

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Ocean Springs Pecan Nursery

Season 1916-17

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor
Ocean Springs, Miss.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

15,000 PECAN TREES

In desirable grades and
Standard Varieties. Healthy,
well grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. Lott Co.

Waycross, Georgia

as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

BOOKS AND CATALOGS

Turkey Creek Nurseries, Macclenny, Fla.; descriptive catalog; 40 pages; finely illustrated; title page has an attractive pecan design. Fruits suited to the lower south, roses and ornamental trees as well as pecans are described and prices quoted on popular grades of stock.

Plant Diseases of the Gulf States with Remedies for their Control; by H. P. Loding. 36 pages; contains much convenient information. Issued by Van Antwerp's Seed Store, Mobile, Ala.

Annual Report of C. E. Pratt, Chief of the Bureau of Foreign and Domestic Commerce. 75 pages covering operations for the year ending June 30, 1915.

Storrs & Harrison Co., Painesville, O. Illustrated catalog of seeds and plants; 200 pages; one of the best in its line.

Seed and Plant Guide; farm, garden and flower seeds. 175 closely printed pages; season of 1916, the 45th year of the publisher, H. W. Buckbee, Rockford, Ill.

Farmers' Bulletin No. 331, on The Peanut, published by the United States Department of Agriculture, gives information that peanuts can be grown on any kind of soil that is well-drained and not sour. In this bulletin can be found full information as to the varieties, cultivation and harvesting of peanuts. Copies may be had by writing to Wilbur McCoy, Land and Immigration Agent, A. C. L. Railroad Jacksonville, Fla.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XV

April 1916

Number 4



THERE is a wide difference between truthfulness and mere veracity. Veracity implies a correspondence between words and thoughts; truthfulness, a correspondence between thoughts and realities. To be veracious, it is only necessary that a man give utterance to his convictions; to be true, it is needful that his convictions have affinity with fact.

—F. W. ROBERTSON.

10c per Copy

\$1.00 per Year

KEYSTONE Pecan Orchard Co.

Producers and Exporters of fine
PAPER SHELL PECANS

OFFICES:

1 Broadway, New York, N.Y.
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Groves: Baconton, Ga.

VARIETIES:

Schley, Van Deman, Frotscher, Stuart

We expect to have approximately five tons of high grade paper shell pecans from our 1915 crop. Varieties: Schley, Van Deman and Stuart. Offers solicited or prices quoted on application.

The W. B. Dukes Pecan Farm Moultrie, Georgia

Growers and
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FANCY PAPER SHELL PECANS

One million grafts and buds of Schley Stuart, Delmas and Moneymaker. Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

THE COHUNE PALM

The nuts or fruit of the cohune palm are 2 to 2¾ inches long, rounded at the base and pointed at the apex, with a tough outer fibrous layer inclosing the nut about one-eighth inch thick and containing a small proportion of fat. A hard, woody shell, about three-tenths of an inch thick, extremely difficult to crack, incloses an oily kernel, occasionally two. The kernels are 1 to 1¼ inches long and about five-eighths of an inch in diameter, resembling ordinary palm kernels, but more elongated, the average weight of a kernel being about one-fifth ounce.

The kernels yield a solid white crystalline fat, resembling coconut oil in appearance and smell. As yet, no use has been found for the outer fibrous layer of the nuts, which yielded under experiment with four lots of nuts an average of 15.6 per cent of a pale greenish yellow oil. This must be obtained by solvents as the fiber will not yield the oil under pressure to any extent; the fat from the fiber is dark greenish in color until clarified with animal charcoal. The average weight of the entire fruit is about one and three-fourths ounces.

LUTHER BURBANK CO. IN BANKRUPTCY

The Luther Burbank Company filed a voluntary petition in bankruptcy on February 1 and was adjudged bankrupt on February 7. The company was made defendant in a suit a few weeks ago by Luther Burbank personally to recover money due him on promissory notes. Mr. Burbank at the same time notified the company of his cancellation of the contract between himself and the company regarding the use of his name and the sale of his productions.

Robertsdale, Ala., is using the pecan for street plantings.

Quality Trees

Pecans

Satsumas

General line of Hardy Citrus Trees

Every shipment
means a satisfied
customer

Your patronage
will prove it

Write for prices
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Florida Nurseries

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Budding Tool

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A popular tool for budding
Pecans, Hickories, Walnuts,
Chestnuts, Persimmons and
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THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., APRIL, 1916

NUMBER 4

SOME LESSONS FROM THE CALIFORNIA WALNUT INDUSTRY

A. V. STUBENRAUCH, Professor of Pomology

R. H. TAYLOR, Assist. Professor of Pomology
University of California

Read at the Albany Meeting of the National Nut Growers Association.

WHILE the nut industries of California and the Southern and Eastern states are dependent upon the cultivation of different classes of nuts, the experience of the growers in the Pacific coast states may be of interest to the southern and eastern brothers. From observations which the writers were able to make during the past summer, it seems to them that the nut industry, especially pecan growing in the South, is as yet largely in the development stages through which the growers of California have already passed. A few statements regarding the history of nut culture in the state may enable the southern growers to avoid some of the difficulties which the California producers have had to face.

The history of nut culture in California presents a number of interesting and varied problems, because of the extreme variations of climate found within the borders of the state, the relative scarcity of the population, the distance from markets of any size, and the comparative newness of the country from a horticultural standpoint.

An analysis of the data available from the 1910 United States census on the production of nuts in California compared with the total crop of the United States, shows that while less than one-half of one per cent of the pecans produced in the United States were grown in California, this state produced 45.53 per cent of all the nuts of all kinds grown in this country. This figure is as high as it is because California produced 98.51 per cent of all the almonds and 96.4 per cent of the walnuts.

Of the entire annual supply of all nuts in the United States, both domestic and foreign, the valuation of the California crop was 65.78 per cent of the total valuation. Normal yearly imports are between three and five times as many almonds, and between two and three times as many walnuts as are produced in this country at the present time.

The duty on shelled almonds was reduced by the Underwood tariff of 1913 from six cents to four cents per pound, and on unshelled almonds from four cents to three cents. On walnuts the duty was reduced from five cents to three cents for shelled, and from three cents to two cents for unshelled. The old duty of one cent per pound on pecans was unchanged.

With the large foreign competition in both walnuts and almonds, it is the general belief that the import duty has resulted in increasing the confidence of planters, and from that standpoint, if from no other, the protective tariff has had much to do with the upbuilding of both these major industries in the state.

History of Almond Culture

Almonds were planted in California by the early settlers in the Fifties, and since then the plantings have increased considerably though not steadily. The early plantings in many cases proved to be so successful that promiscuous plantings were made in many portions of the state where no trials had previously proven their adaptability. Many orchards were planted in low spots where late spring frosts were frequent, and in soils which were not suited to the almond. As a result there was a slump in the almond industry during which thousands of acres of almond orchards were dug up when they should have been in profitable bearing. As the orchards which were left grew older, the trees were, in many cases, left to shift for themselves with little or no care. While the trees were young, they bore profitable crops in spite of the lack of care, but as they became older, the crops gradually decreased until they no longer returned a profit. These orchards, therefore, went the way of the others. During these years some growers were consistently making money in the better sections and new plantings were constantly being made. The

result has been only a comparatively small range of variation from year to year in the almond acreage of the state. About five years ago, however, this condition changed. The continued good returns obtained from a few well cared for and younger orchards has awakened interest in the industry and new plantings have been made. The inevitable result has been the organization of promotion and development enterprises, and we may confidently expect that in many instances there is likely to be a repetition of the old failures due largely to errors of judgment in the choice of sites as well as in the selection of varieties.

California Almond Growers Exchange

One of the greatest factors in stabilizing the almond industry was the organization of the California Almond Growers Exchange in May, 1910, composed of eleven local associations which had been previously formed. Since the successful launching of this enterprise, the prices received by the growers rose higher and higher so that the previous uncertainties of marketing were largely avoided. The greater confidence thus created led to a further extension of the plantings, so that at the present time the Exchange estimates the production will increase four or five hundred per cent in the next five years.

Early History of Walnut Culture

The walnut industry, on the other hand, has had a more uniform and steady growth. The tree requires a longer time than the almond to come into profitable bearing and being more uniform in production from year to year, there has not been so great fluctuation in the acreage.

For a long time it was supposed that Persian walnuts could only be grown successfully on a commercial scale in southern California. Several early attempts in the northern part of the state resulted in failures, though this now appears to have been due to improper care and to planting the wrong types of walnuts. The seedling groves of the southern part of the state yielded profitable returns to the growers and the acreage gradually increased until the walnut blight became prevalent. The blight was first noticed in Los Angeles county about 1891, and in the next decade it spread through the southern groves to such an extent as to cause serious alarm. The prevalence of blight varies greatly in different years, much depending on the climatic conditions during the spring and early summer.

The blight investigations, which were carried on for years in the state, together with the pioneer efforts of a few optimistic growers, brought out the fact that in some cases the walnut thrives in sections formerly supposed to be unsuited to them, and this resulted in the planting of varieties ad-

apted to the local conditions, until at the present time some of the northern plantings rival many of the best in the south. New plantings are continually being made, and with the enlarged area now known to be suitable to walnut culture, the acreage is likely to increase considerably.

California Walnut Growers Association

The walnut growers of California found themselves in the same situation as the almond growers a few years ago and they too found it necessary to co-operate. First, independent associations of growers in the different districts were formed for the purpose of pooling their crops. Eventually these associations found that they were competing with each other in the outside markets composed of large wholesale buyers. The several associations then united and formed the California Walnut Growers Association. For several years the separate associations operated under a "gentleman's agreement." Recently the Central Association has been reorganized, and at present all the local associations are combined into a single organic unit.

The almond and walnut growers organizations handle, in each case, over 70 per cent of their respective crops produced in the state.

Marketing Problems

The enormity of the marketing problem facing the California growers will be partially appreciated when we consider that California, in the year 1909, found it necessary to market 45.5 per cent of the entire nut crop of the United States with most of the markets from one to three thousand miles away.

Of the sixty-two million pounds of all nuts produced in 1909 in this country, somewhat less than ten million pounds were pecans. At the present time the production of high grade pecans is so small, and the prices obtained so high, they do not enter into serious competition with California nuts. The inferior varieties fill a market which California almonds and walnuts cannot reach. With the normal growth of the real pecan industry in the future, there must come a time when competition will be closer than at present between almonds, walnuts and pecans in the American markets. When that time comes the pecan growers will undoubtedly have to solve some of the problems of organization and marketing which the almond and walnut growers of California have been forced to solve.

The question of growing the crop at minimum cost and maximum production may be largely solved and cared for by the individual with the aid of the experiment stations, but the question of the disposal of the crop is one that will require united effort, as the problems of sale and distribution

are beyond the control of the individual grower.

The nut crops of California having gone so far beyond local demands, the growers were forced to send their crops not only to markets over which they had no control, but about which it was impossible for the individual grower to obtain anything like accurate information. To complicate matters, foreign competition is keen, and its influence is one which cannot be regulated by the individual grower.

The California growers of both almonds and walnuts for many years were at the mercy of the large buyers. Prices fluctuated greatly and often with no apparent reason. Prices paid for the same product during the same season varied in different localities, and even with different growers in the same locality. In other words, the buyers were in the habit of dividing the territory among themselves and paying whatever prices they thought the growers were forced to accept. Prices received by the growers were just sufficient to keep them in business, hoping for better things in the future, yet not sufficient to pay for their efforts.

Conditions finally reached the point where the growers in a given locality organized local associations for the purpose of pooling their crops, thereby hoping to obtain better prices. The organization of buyers and apportionment of territory by them prevented this from working out as the growers had hoped it would. The local associations actually found themselves competing with each other, so that it became necessary for them to organize into a central exchange.

The organization of the California Almond Growers Exchange brought a sufficiently large tonnage under one management so that expert help could be obtained to market the crop properly. This resulted in a reversal of conditions whereby the buyers were forced to bid up the prices in order to prevent the exchange from getting the entire business. The profits which had been going into the pockets of the buyers now were distributed largely among the growers.

Problems of Organization

The organization of the growers in this way, however, is not without its difficulties. To be permanently successful it must be a stabilizing influence and not an exploiting influence. Growers are often liable to want more than is due them. They will, if given the opportunity, endeavor to raise prices to a point not justified by trade conditions. This would undoubtedly result in the breaking of confidence in the exchange, which buyers are constantly endeavoring to accomplish. As long as the prices named by the exchanges, decided upon after careful and accurate consideration of all the

market conditions so that these prices actually represent true market values, the jobbers and wholesalers in the eastern markets will look upon such an organization as a means of steadying the trade. The management of both nut organizations has been the means of bringing this condition about so that where, in former years, the buyers in the eastern markets were never certain of the immediate future of the business, even two or three weeks ahead, they are now much better able to arrange for the entire season's supply without fear of any serious depressions in prices, at least until after the holiday season. The central exchanges guarantee their opening prices against decline until January first, following the naming of prices.

Factors for Success of the Nut Industry

The factors which have been most prominent in the success of the nut industry of the state may be briefly summarized as follows:

First: The ability to produce a product of uniform and good quality.

Second: The absolute necessity of co-operation because of the distance from the large markets and the former instability of the trade.

Third: The careful and thoughtful organization of the growers because of the necessities named above.

Fourth: The exercise of great care in living up to agreements made with both growers and the trade. Failure to do this has more than once jeopardized the welfare of either one or the other of the organizations, because unscrupulous growers supplied grades inferior to those graded by the exchange.

Fifth: The careful attention to grading by the individual growers, local associations and the central exchange.

Sixth: The improved and more uniform methods of handling made possible through organized effort.

Seventh: A reduction in the cost of handling due to the co-operative purchase of supplies for the grower members.

The application of these factors to the pecan industry of the South may be accomplished with greater or less difficulty, depending upon a realization of the fact that co-operation, in order to be successful, must be born of necessity, and a realization of that necessity.

The pecan growers have little or no foreign competition, while the almond and walnut growers have serious foreign competition. Consideration of the foreign crop available is one of the hardest factors to deal with in naming prices that shall be fair to both grower and consumer.

(Continued on page 54.)

The Nut-Grower

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GEORGIA-FLORIDA ASSOCIATION

The tenth annual convention of the Georgia-Florida Pecan Growers Association will be held at Thomasville, Ga., on May 31 and June 1. The program for the meeting has been announced as follows:

Wednesday, May 31, 10 A. M.

Call to Order.

Invocation, Rev. A. F. Cook.

Address of Welcome, Mayor J. Fondren Mitchell.

Response to Address of Welcome, J. B. Wight, Cairo, Ga.

President's Address, C. A. Simpson, Monticello, Fla.

"Intercropping for the Land's Sake, as Well as for the Man's Sake," A.S. Perry Cuthbert, Ga., B.W. Stone, Thomasville, Ga.

"Best Method of Top-Working," C. A. Locke, Eufaula, Ala.

Announcements.

2:00 P. M.

Report of First Year's Progress of the National Pecan Exchange, C. A. Van Duzee, Cairo, Ga.

"Fungus Diseases and Field Observations," S. M. McMurren, Thomasville, Ga.

"Pecan Soils of the Georgia-Florida Section," J. Wm. Firor, Athens, Ga.

"Nursery and Orchard Culture in Europe," L. Majewski, Monticello, Fla.

7:30 P. M.

"Gathering and Preparing the Nut Crop for Market," J. M. Patterson, Putney, Ga.

"Needed Legislation for the Nurseryman," T. H. Parker, Moultrie, Ga.

Round Table—Report on the Behavior of the Leading Varieties:

Americus—H. W. Smithwick.

Albany—H. C. White.

Fitzgerald—Bernie Fohl.

Cairo—J. B. Wight.

Thomasville—B. W. Stone.

Monticello—W. W. Bassett.

Waycross—J. F. Wilson.

Thursday, June 1, 9:00 A. M.

"Fertilizers and Soil Building," H. C. White, Putney, Ga.

"Latest Development in Control of Insects in the Pecan Grove," H. K. Miller, Monticello, Fla.

Data on the Blooming of the Different Varieties, H. P. Stuckey, Athens, Ga., J. Slater Wight, Ga.

Miscellaneous Business.

Report of Standing Committees.

Selection of Place for Next Meeting.

Election of Officers.

2:00 P. M.

The afternoon will be devoted to an automobile ride complimentary to the members of the Association by the Chamber of Commerce, to some live stock farms, pecan groves and other points of interest.

Successful pecan growing requires:

1. Suitable soil and climatic conditions.
2. Healthy trees of the best varieties.
3. Proper care and cultivation, with ample supplies of moisture and plant food.
4. Competent business and horticultural management.

SOME LESSONS FROM THE CALIFORNIA WALNUT INDUSTRY

(Continued from page 53.)

On the other hand, pecan growers must expect lower prices than they are now receiving for bud-ded selected varieties. The increased production of high grade nuts which is bound to come will bring with it, first, a drop in prices to normal, and then the necessity of developing increased consumption to keep pace with the increasing production. At this juncture co-operation should prove invaluable, as it has and still is with the almond and walnut growers of California.

Improved methods of handling and packing will be found necessary if any considerable increase in consumption is to be expected, and here again co-operative methods should prove invaluable.

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WITH THE EDITOR AND HIS CORRESPONDENTS

TOP-WORKING THE BIT- TER PECAN

Editor Nut-Grower:

As a subscriber to your valuable paper, I ask that you have the kindness to publish my letter in your paper with a request that the information be supplied by some of your readers who may have had experience along those lines.

Our section is blessed with thousands of trees of the bitter pecan, botanically known as *hickoria aquatica*, growing on overflow lands. These lands are inundated yearly by overflow from the Mississippi river and are therefore unfit for cultivation. It happens, however, that the dry period falls about the time that the pecan harvest comes around. I am trying to take advantage of all those conditions by top-working those trees to the approved named varieties of sweet pecans.

I have top-worked (grafted) 360 trees this spring, and I have 1500 trees topped in December last year that I intend to bud this summer.

I very much desire information from experienced growers as to the probable outcome of the venture. I have a great many more trees that I could top-work if I can be assured that such work is a success. I am, however, not going to top-work any more than the above until I make a success myself or until I can be positively assured by reliable growers that they have made a success along the lines that I mention. As it is, I feel that I am experimenting on a large scale.

I am enclosing you one of the nuts from my trees sent to the

Bureau of Plant Industry, Washington, D. C., and there identified by Mr. H. C. Skeels, of the Office of Seed and Plant Introduction to be bitter pecans, botanically known as *hickoria aquatica*.

Hoping to be favored by a great deal of light on the subject from you or your readers, I beg to remain

J. R. OLIVIER.

St. Martinville, La.

Dr. Olivier's letter was referred to Prof. E. J. Kyle, of the Texas College of Agriculture. He replies as follows:

Editor Nut-Grower:

There is absolutely no question as to the practicability of working over the bitter pecan to our improved varieties, provided the work is properly done and the local conditions are such that the trees can be protected after the young shoots are forced out.

I will state that the question as to whether Dr. Olivier will succeed with this proposition will depend upon a number of conditions.

1. The trees that are to be top-worked should not be over eight or ten inches in diameter, and the smaller they are, down to sprouts two or three inches in diameter and six or seven feet high, the better will be the results.

2. The method of doing the work will have a great deal to do with the success. There are several methods that have been proven to be successful. In Texas we have gotten better results by the budding methods, but there have been a few instances where successful work has been done by grafting. If I were going to work the trees over my-



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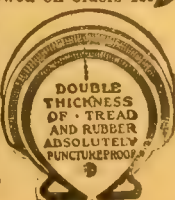
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self, I should depend upon budding. I am now working over a number of seedling pecan trees on the campus of the A. & M. College of Texas, and am having splendid success. The trees were chip budded about the middle of March and are now forcing out the buds nicely. There is one one young tree, for instance, on which I placed seven chip buds, six of which have already forced out into strong, vigorous growth. The top of the tree will be almost perfectly formed from these six buds. I judge that this tree will be in bearing within two years. We began chip budding here the first of March. About the tenth of April, we began crown and modified shield budding. While we cannot tell yet just what the results are going to be from the two last named methods, there is no question but that the results from the chip budding are going to be highly satisfactory. We have over twenty students taking work in pecan culture who were given work on young pecan seedlings in chip budding, and their success, when you take into consideration the fact that they were just learning the method, has been remarkable.

Next to the chip bud, I prefer the patch bud, which can be done during July. Those trees that were topped back this winter by Dr. Olivier should be in first-class shape to top-work, beginning the first of July and working as long as the sap is flowing freely.

3. It is not only important to have the right kind of trees, and to use a successful method of budding or grafting, but it is absolutely necessary that the young buds be properly looked after while being forced out and especially after they have started into growth. The native sprouts should be kept in check and the young sprouts from the buds should be carefully staked so as

to prevent blowing and breaking by the winds and birds.

I think Dr. Olivier is wise in not going into this proposition on too large a scale until he finds out whether or not it will work successfully in his particular location. It requires a great deal of careful and painstaking work to be successful in top-working pecans, and one should not go into the proposition unless he is willing to put sufficient effort into it to make it a success.

My article, published in The Nut-Grower some time ago, on methods of budding the pecan will give full instructions as to the different methods.

E. J. KYLE.

College Station, Tex.

A TYPICAL AMERICAN TREE

(Continued from last issue.)

Higher up on the ridges and uplands you will find that smooth barked cousin of the shagbark, the mockernut hickory, so named by the country boy because of its thickshelled nut with the small, sweet kernel, which looks so very like a shagbark nut, but which after several stones have been smashed in breaking it, yields only a tiny reward for the great labors involved. This tree will grow in sand base soils as well as in all the others, and is blessed with a glorious, pale yellow leaf coloration in autumn.

The wood is equally valuable as the shagbark, but more pliant. Woodsmen use it to make ropes of usually by peeling off the bark and plaiting it into a rope, kept smooth and pliant by rubbing it with deer fat.

Growing in still poorer soils if need be, but on rocky ledges and hillsides by preference, is the pig nut hickory a rather small member of the family, but very handsome, especially when it paints blobs of sheer orange on your hillside in autumn. The nut is

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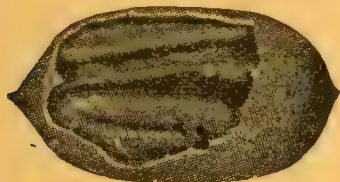
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very variable, some specimens giving a small thin-shelled bitter nut, and other ones with thick shells, occasionally sweet. It is a sort of degenerate shagbark, with the same five to seven leaflets, but smaller and pale underneath; bark gray, but close adhering. This tree is well worth saving, even though its nuts are not edible, as it is always handsome in appearance, even state-ly when growing in generous soils (reaches 120 feet high and three feet in diameter in the Ohio basin) and its lumber commands high prices for wagon and tool work, so that you are blessed if your hillside has a fair sprinkling of them. Planted from seed, not to be transplanted like other hickories.

The last of the group is the swamp hickory or bitternut. It will get a foothold of its own accord on the edge of a pond or lake, and, as it there gets plenty of sun, will have a lot of long branches and therefore be useless as lumber. However, both it and the pignut yield grand fire logs for the open fire in the library of a winter's night, so that any surplus of them growing in swampy spots should be encouraged for future stores in the woodpile. It has eleven leaflets, small and narrow; and a small, bitter nut, but at that, the tree affords a refuge and a granary for red squirrels and chickadees. As a landscape feature on a pond border it makes a most graceful and attractive hickory, with orange leaves in the autumn. It grows readily from seed and can be transplanted with care, taking up while dormant and following the roots out far enough to get a reasonable amount of feeders. Transplant in the spring well before the sap starts up the tree.

All the hickories have two kinds of flowers, the sterile green catkins, which furnish the pollen, and the fertile flowerets, which later develop into nuts.

The tree is thus able to set its own fruit, and the seed years are from two to three years apart. —W. H. Miller, in American Forestry.

A RIVAL FOR SAN SABA

Mr. R. S. Price of Houston, Tex., has a tree producing nuts which he says will rival those of the San Saba, both in quality and thinness of shell. Mr. Price gives the following description of the tree:

My tree is a large, old native, about 3¼ feet in diameter at the base, probably 60 to 100 years old; height, about 75 or 80 feet; spread of branches, irregular—would guess it at 60 to 75 feet. It is a fairly good and regular bearer, and is vigorous and healthy, though a good part of the butt and the larger lateral roots have been exposed for years by the washing away of the soil around it. It is near other old trees in my irrigated alfalfa bottom—no cultivation. Average of nuts to the pound ordinarily 90 to 100. They were a trifle undersized last year.

DYNAMITE AS AN AID TO INTENSIVE CULTIVATION

Being an agricultural blaster of several years' experience, and having used dynamite in practically all kinds of farm work, I find it one of the greatest aids to intensive cultivation and farm improvement in general.

For maximum returns from farm operations at a minimum expense every available spot must produce its utmost. This cannot be hoped for where the farm lands are dotted with stumps, boulders or other obstructions which hinder the operation of modern machinery.

Farm blasting is not an expense, but an investment. Every dollar spent for improvement is

just that much more added to the value of the farm. Often these improvements pay for themselves in one or two seasons.

A few weeks ago I completed a job for a northern man. He expected the stumping work to cost him about \$25 per acre. After the job was finished the average cost per acre was \$15 and it was a pretty stumpy job, too. He told me that where he came from people paid more attention to improving their farms than they did to raising so much stuff to be put on a glutted market at many times below the cost of production.

This idea of constantly improving farm values as one goes along is excellent and should receive more attention at the hands of farm owners than it does.

Subsoiling with explosives is another method of increasing the farm's productivity, especially on soils which have tough clay subsoils. I drill holes about 15 feet apart each way about 3 feet deep, and exploded one-quarter of a pound of dynamite or farm powder in each hole. For best results this work should be done in the early fall when the ground is driest. When the soil is thoroughly broken up and becomes saturated with water to this depth it will insure your crop going through the severest drouth, and beside this the effects of blasting are the same on the succeeding crops for several years.

After one becomes thoroughly acquainted with the many different uses of dynamite on the farm he will wonder how he ever got along without it.—A. H. Harris, Madison county, Tenn.

INFORMATION WANTED

The Department of Agriculture desires to secure information concerning individual nut trees, either native or introduced, which bear nuts of such superior excel-

lence as to justify special consideration.

The nuts which are of special interest at this time are the pecans and other American hickories, black walnuts, butternuts, chestnuts and hazels, as well as foreign walnuts, chestnuts and hazels (filberts). It is also important to locate beechnuts, chinquapins and Japanese walnuts of especial merit.

To be worthy of the attention of the Department, trees must be hardy in the section where found, vigorous, prolific and bear annually; nuts of medium size or above; uniform in size and shape; thin-shelled, easily cracked; kernels plump, rich in quality, pleasant and agreeable in flavor, and easily removed from the shells in unbroken halves.

The Department will send to those willing to co-operate in this inventory of nut trees, franked packing boxes in which to forward samples of the mature nuts from trees considered worthy of record.

The Department particularly desires information regarding the size, character age and bearing habits of the trees.

MAY BEETLES

The foliage of pecan and other nut trees is often injured by May beetles. One of the most destructive of these is the hairy May beetle (*Lachnosterna hirticula*), which has a most pernicious habit of severing the bud and foliage of the tree attacked.

The best remedy is jar the insects from the affected trees on curculio catchers, special receptacles made for catching the plum curculio.—Chittenden.

THE AD SOLD 'EM

You will please discontinue my advertisement in The Nut-Grower as, thanks to this ad, I have sold all of my crop and could

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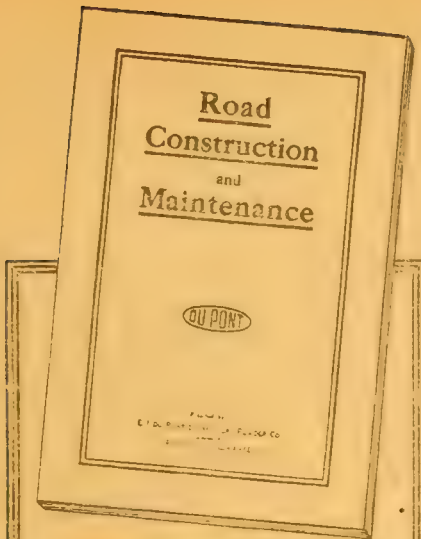
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ITEMS OF INTEREST

Mr. H. M. Perry, of St. Joseph, Mo., has a ten-acre pecan orchard at Port Hudson, La.

The stockholders of the National Pecan Growers Exchange held their annual meeting at Albany, Ga., April 11.

The English palm-kernel cake has a feeding value ranking higher than cotton seed or linseed meal and equal to oatmeal.

Mr. T. H. Parker of Moultrie, Ga., believes in the value of The Nut-Grower to such an extent that he pays annually for many subscriptions for his patrons.

The cocoanut palm is not free from insect injury. The rhinoceros beetle reached German Samoa in 1909 from Ceylon in sacking. Large numbers of the trees have been killed by the pest in the infected districts.

Owing to the unusual dry heat which prevailed in the Grenoble walnut district from August up to the time of gathering the 1915 crop many of the nuts were affected and found to be lighter than usual. The proportion of shriveled and worthless nuts was as high as 30 per cent in some localities.

NUT RECIPES

Nut Cake

One and one-half cups sugar, one-half cup butter, three-fourths cup of sweet milk, two level teaspoons baking powder, whites of four eggs, flour to make a good batter. Beat this mixture thoroughly, then stir in one cup of finely chopped nut kernels and bake.

Nut Cookies

Two eggs, two cups sugar, one-half cup melted butter, a scant half cup of milk, one teaspoon



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STATEMENT OF OWNERSHIP, Management, Circulation, etc., required by the Act of August 24, 1912, of The Nut-Grower, published monthly at Waycross, Ga., April 1, 1916.

Editor, J. F. Wilson, Waycross, Ga. Managing Editor, None.

Business Manager, Chas. N. Wilson, Waycross, Ga.

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J. F. Wilson, Waycross, Ga.

Chas. N. Wilson, Waycross, Ga.

G. M. Bacon, DeWitt, Ga.

H. C. White, Putney, Ga.

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Known bondholders, mortgagees, and other security holders, holding one per cent or more of the total amount of bonds, mortgages or other securities: None.

J. F. WILSON, Editor.

Sworn to and subscribed before me this 21 day of March, 1916.

J. S. ELKINS,

Notary Public, Ware County, Ga.
My commission expires Aug. 11, 1916.

cream of tartar, one-half teaspoon soda, one cup finely chopped nut kernels stirred into a sufficient quantity of sifted flour to make a dough stiff enough to roll well.

Nut Cream Cheese

Put half a pound of pot cheese in a bowl, add to it half a cup of cream of chopped nut meats, a few grains of salt and pepper and a tablespoon of chopped parsley. Stir to mix thoroughly, form into small balls or cakes and serve cold with celery or lettuce and saltines.

German Nut Loaf

Put into a bowl a cupful each of chopped sultana raisins and chopped nut meats. Add a teaspoon of salt, half a cup of sugar, three cups of flour and three teaspoons of baking powder. Stir all together to mix thoroughly. Then add about two cups of cold sweet milk, stir vigorously again to mix, and pour into a well-greased bread pan. Then put in a fairly hot oven and bake for an hour.

ADDED VALUE TO A FARM

No one who has seen a large pecan tree but has been struck with its symmetry and beauty. There are few homes whose attractiveness would not be added to by having several pecan trees around the yard, garden and barn. In addition to the shade which they furnish they would also make glad the owner's pocket-book. And what is true of the farm is also true of most town and many city homes where there is room for one or more pecan trees. Last year on my home lot in Cairo, which consists of a little more than two acres, I grew \$500 worth of nuts, besides having ample space for yard, garden, buildings, etc. The trees grow mainly on the borders of the lot and so interfere very little with other things. There is not a farmer in the pecan belt who ought

not to have a few pecan trees planted around his home, even if it is but to grow nuts for his own use. My family of ten use about 200 pounds of nuts per year, and they have them whenever they want them. I generally grow this many and more on one tree set twenty-three years ago.—J. B. Wight.

DEAD WOOD HARBORS DISEASE

All dead wood in the pecan orchard should be pruned out and burned while the foliage is green and in a healthy state. If pruning is delayed until the leaves fall, much of the dead, diseased and dying wood will be overlooked. Dead wood harbors both insect and fungous diseases.

One of the most dangerous diseases which lurks in dead wood, according to the University of Florida Experiment Station, is die-back. The twigs die back from the ends. On recently infected branches the terminal buds push out prematurely. When the twig is cut off back toward the healthy wood it appears to be water-soaked. The inner bark is dark and the pith discolored. The dead and diseased portions should be pruned well back in the healthy wood and the wounds covered with grafting wax, paraffine or some substance that will prevent evaporation and the entrance of disease.

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PEANUTS AS FOOD

The University of Texas has issued a bulletin enumerating the many uses which may be made of the peanut. No longer may this popular adjunct of the circus be arbitrarily confined to peanut stands and to red soda water counters.

The peanut through scientific investigations, has been raised to the standard of the pea and the bean in its relation to modern diet. Many appetizing dishes may easily be made from the peanut, all of which are contained in this little bulletin.

The peanut is a pea, and belongs to the same family as the common pea or bean. True its flavor is similar to that of a nut, from whence comes the term "nut" applied to it; but no one who reads what the aforementioned bulletin has to say about it will doubt its high food value.

In justifying the classification as above given it is stated that 25.8 per cent of the peanut is protein, or tissue-building food, compared to 21 and 25.5 per cent respectively for the dried pea and the dried bean, while the peanut's fuel value amounts to 2500 calories of heat (which may be transformed into energy) compared to 1611 calories for the dried pea and 1565 calories for the dried bean per pound.

Moreover we learn that 10 cents worth of peanuts have a

food value equal to 62 cents worth of steak, 34 cents worth of milk, 20 cents worth of cheese. 18 cents worth of potatoes and nine cents worth of beans. These figures reveal an important fact to the hungry world, which, since the price of meat has broken the altitude record, has been looking for a substitute for meat. The peanut, when it comes into its own will go far towards solving this vexing problem.

In addition to its prolific yield in Texas, and its consequent cheap price, the peanut is one of the most nutritious foods known to man. Peanut butter, which may be easily made by any housewife, is said to have three times the food value of a soggy egg sandwich for the school child. Recipes are included in the bulletin for the making of soups, breads, dressings and desserts. Housewives interested in the use of the peanut as an article of family diet may obtain a copy of this bulletin by addressing the extension department of the University of Texas at Austin. —Ex.

BOOKS AND CATALOGS

Peanut Culture is the title of one of a series of farm manuals issued by the Virginia-Carolina Fertilizers Chemical Co., Richmond, Va.

Thoroughbred Pedigree Strawberry Plants; 60 illustrated pages with description of varieties and cultural directions; R. M. Kellogg Co., Three Rivers, Mich.

Phoslime, a Natural Fertilizer; describes the uses and advantages of a Florida product offered to the public by the Florida Soft Phosphate & Lime Co., Ocala, Fla.

William P. Stark Nurseries, Stark City, Mo.; catalog of small fruits, peaches and shrubbery; contains much practical information; 160 pages; illustrated; handy index.

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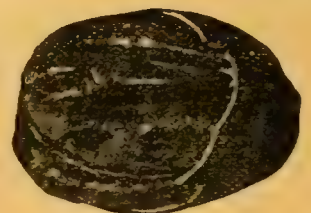
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The 1915 Year Book of the Department of Agriculture is a volume uniform with previous issues, containing a variety of information and statistics so classified and presented as to make the book of convenient and practical use.

Inside Facts of Profitable Fruit Growing is a 90 page pamphlet by Wm. P. Stark, Stark City, Mo., which makes the author's extended experience available for the public use. Copies may be had on application.

Northern Nut Growers Association; Report of the Sixth Annual Meeting, held at Rochester, N. Y., September 1 and 2, 1915. Eighty pages with list of officers and members and the constitution of the association. W. C. Deming, Secretary, Georgetown, Conn.

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, road. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversities of crops grown in South Georgia as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

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The Nut-Grower

Volume XV

May 1916

Number 5



WE often live under a cloud, and it is well for us that we should do so. Uninterrupted sunshine would parch our hearts; we want shade and rain to cool and refresh them. Only it behooves us to take care that, whatever cloud may be spread over us, it should be a cloud of witnesses. And every cloud may be such, if we can only look through to the sunshine that broods behind it.

—HARE.

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THE NUT-GROWER

TREE GROWTH IN BLASTED GROUND

By J. R. Mattern.

One in a judicious frame of mind may often wonder, after ten years or more of active propaganda by the powder companies for the use of explosives in preparing the ground for trees, just what the average results of such blasting may be. It is certain that literally thousands of planters of fruit trees have made use of the method. In some of the famous fruit sections of America blasting has become the universal, standard practice.

An examination of a good many orchards where the trees are growing in land prepared for them by blasting shows, first of all, that the trees are anchored more securely. There is far less of that leaning away from the wind that characterizes too many orchards. It not only is unsightly—it often means the breaking down of the trees under their usual loads of fruit. I do not know whether this can be attributed to a deeper root system or to more extensive root systems. Probably it is a combination of both.

I have not observed that in young trees the blasting of the ground results in much thicker growth of the trunk, though only a few trees have been measured within my observation to check up this point. But in older trees that are growing in ground containing hardpan, there is a decided increase in the thickness of the trunks of the trees where the ground has been blasted. Probably the young trees do not yet have vital need of the underlying strata of soil. Probably the trees begin to suffer from the lack of food and lack of water that stunts them and keeps them back only after they have thoroughly worked over the top-soil within reach of the roots. In one instance, apple trees over hardpan were lifted by the forces of growth un-

(Continued on page 78)

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THE NUT-GROWER

VOLUME XV


WAYCROSS, GA., MAY, 1916

NUMBER 5

INTER-CROPPING FOR THE LAND'S SAKE AS WELL AS FOR THE MAN'S SAKE

BY A. S. PERRY

Read at the 1916 Meeting of the Georgia-Florida Pecan Growers Association

 R. PRESIDENT, ladies and gentlemen: It would be presumptuous in me to attempt the role of instructor to this audience of veteran nut growers, so in the beginning let me disclaim any such intention. If I can but handle my subject so as to stimulate your thoughts and provoke a discussion by you, I will deem myself most fortunate.

Let us, as briefly as we can, discuss the matter from a theoretical standpoint first, then I will tell you of the methods I have adopted in my own orchard and the results attained on wornout Randolph county land that had made fifty consecutive crops of cotton.

Inter-cropping is by no means a side issue in scientific nut growing. How to use to best advantage the land between the tree rows has, no doubt, at one time or another, occupied the attention of us all. Probably the syndicates and men of great wealth who plant large orchards may well afford to wait through the long, lean years until they begin to reap the golden harvest that is promised to those who toil and faint not, but the man of moderate means must in some way tide over these unprofitable years.

With the trees planted twelve to the acre, which seems to be the correct number according to our present information, we have a vast amount of land not needed by the trees for several years, which the land as well as the man require to be regularly cultivated.

A pecan orchard is an expensive proposition at best for the first eight or ten years, and no doubt all of us have puzzled our brains in trying to devise an efficient yet economical system of orchard management. I frankly confess that this question has brought me to my wit's end more than once. These first years, with all going out and nothing coming in, is the great bug-bear of our industry that has scared away many good men. The high cost of orchard maintenance is the Banquo's ghost that must be laid before we can interest the small land owner in pecan growing. I do not claim to have solved the problem, but I am convinced that the av-

erage pecan grower's salvation for the first ten years lies in the crops grown between the trees.

There are three classes of crops that are grown in a pecan orchard. First, those that rob the soil of moisture, humus and fertility, and leave it poorer than it was the year before. Second, those that not only rob the soil of its fertility, but breed disease and harbor pests. Third, those that leave the land richer than it ever was before, that return humus to the soil and starve out the root-knot nematodes. It seems foolish to ask an intelligent audience of Georgia and Florida nut growers, "Which of these crops will you plant?" But we can all profit by studying this question.

It is sad but true that there are men who will spend considerable sums in planting a pecan orchard and then through carelessness or ignorance will so impoverish the soil by unwise inter-cropping that their trees become stunted, and they quit the game in disgust, branding the pecan industry as a snare and a delusion.

Now let us consider more specifically the three classes of crops referred to a moment ago. First, those that rob the soil. Perhaps the greatest robber of southern soils is cotton. For this reason the pecan grower should renounce allegiance to King Cotton. The clean cultivation required by cotton leaves no vegetable matter to be turned into humus. Its long season, from March to January, leaves no time for a winter cover crop. But the boll weevil has settled the cotton question, so we pass on.

Oats and Bermuda grass have no place in a well kept orchard. I know that at least one very successful grower will take issue with me here, and I realize that I would make a rather sorry sight in attempting to argue any horticultural question with him, but facts are stubborn things. Now, pecan trees have grown for this horticultural wizard in the midst of oats and Bermuda grass, but they have not done so for my neighbors, and I don't believe that they will do it for you or me either; and even if he should attempt to prove his theory by showing his splendid trees, I can only wonder as to what

magnificent proportions they would have grown had they not been so handicapped with small grain and grass.

Potatoes and, in some sections, tobacco and perhaps other truck crops, if highly fertilized, will return a handsome profit in money to the man, but unfortunately they infect the land with root-knot nematodes, which will sooner or later cause serious damage to the pecan trees. Sweet potatoes are to be avoided for the further reason that they tend to prolong the trees' growing season until late in the fall and thereby increase the danger of winter-killing.

Now let us consider the third class of crops—those that enrich the land as well the man. I refer, of course, to the legumes, velvet beans, peanuts, Brabham and Iron cow peas, beggar weed and the clovers. There is hardly an acre in all our Southland that does not cry out for nitrogen, and since nature is carrying millions of this precious element above every farm, let us supply the connecting link and store it in our soil in an available form on the roots of leguminous crops. A vital point to consider also in this connection is that almost all legumes suitable for southern farmers, with the possible exception of soy beans, crimson clover and some varieties of cow peas, are practically immune to the root-knot nematode, and a succession of these crops for three years will starve out these microscopic worms and absolutely free any infested land.

Legumes are nature's wonder workers, the magician's wand which allows the farmer to take from his land and still leave it richer than before. By their systematic use our orchards will become like trees planted beside the rivers of water which bring forth their fruit in their season, a source of perennial pleasure and never ending profit, like the widow's barrel of meal and cruse of oil. While this is true, it is also true that the continual growing and removal of legume crops from the land will deplete the supply of potash, lime and phosphorus. Of course, German potash is not to be had at any price, but lime and phosphorus are comparatively cheap, and I have been told that cultivation will liberate nature's store of potash and make it available for the growing crops. Of course, we all understand that the better plan is to feed the legumes to live stock and return the resulting manure to the land, but oftentimes the conditions surrounding the pecan grower prevent this. Happy is the man who can so utilize these crops.

Up to date I have found no place for livestock among growing pecan trees. Even the well behaved family cow can bite off more in a minute than nature can restore in a season. Let me suggest, go slow on cattle raising if you must use the

orchard as grazing ground. It is unwise for the pecan grower to plunge too deeply in stock raising, for some fine morning he may come to himself and agree that "fools rush in where angels fear to tread." For my own part, I have chosen the safer if less efficient method of plowing under the entire crop.

In my own orchard the trees are planted in sixty foot checks. In the middles are peaches in fifteen foot checks. Reserving a strip on each side of all the tree rows for cultivation, I am following a system of leguminous crops that have already proved profitable to the land and the man. Acting on the suggestion of our state entomologist, Mr. Worsham, and with the assistance of Mr. W. J. Boyett, the very able young man who is the farm demonstration agent in my county, I have gone in for Brabham peas in summer and crimson clover in winter. Now, understand, I do not claim that Brabham peas and crimson clover are the ideal legumes for all pecan orchards. I adopted them because, after careful investigation, they seem best suited to the peculiar conditions that existed in my orchard. This question is one that each grower should study and answer for himself according to his own needs.

The peas are planted in drills and picked for seed, the vines being turned under in October, then comes the clover, which is turned under in April, to be followed by the same crop for three years. By that time I expect to have the soil free from root-knot nematodes and filled with nitrogen and vegetable matter, and as the humus content of the soil increases, ground phosphate rock will be substituted for acid phosphate, and a material saving thereby affected in the price of fertilizer. Lime is as essential as inoculation for legumes, and to this end I began with three thousand pounds of ground limestone per acre and will make additional applications as the need arises.

I will agree with any of you gentlemen who say that the velvet bean is the king of legumes for southern farmers, but it is not adapted to my orchard, as its rank growth of vine would interfere with the peaches.

In my section the ideal system of intercropping seems to consist in short life fruit trees as a money crop for the man's sake, and a continuous round of legumes for the land's sake. My peach trees are simply fillers and I expect to cut them out, not, however, until I shall have gathered four or five crops of peaches, any one of which will return the full cost of orchard up-keep.

In conclusion, let me say that my pecan trees are my first and only love. I let nothing in the orchard, nor out of it, interfere with their growth and development, and let me urge each of you to adopt the same policy. So plan your inter-crops


that under no circumstances will they interfere with the pecans. No matter how promising the prospects, never hesitate to use the mower or the plow if the best interest of the trees seem to demand it.

By this method and a very moderate use of commercial fertilizer, my three year old pecan trees are today laden with nuts, and are as large as other pecan trees twelve years old growing in a nearby Bermuda pasture.

And if I am addressing today a soil-robbing nut grower, permit me to suggest, with apologies to Walt Mason, "You've got it mixed, and you are headed wrong, but I've a field for cow peas fixed and I must jog along. Just let me say before I go that nature's laws are just and that man stands a splendid show to get in debt or bust who tries to cheat the land he tends. Go plant some clover, beans and peas, and thank the good Lord he sends to you such splendid crops as these."

The Northern Nut Growers Association is doing good work in assembling and distributing information regarding the so-called English walnut. When we remember how widely our black walnut is distributed and how it adapts itself to a wide range of conditions, we naturally expect that the using of this native tree for stock and the continual testing of varieties that can be grown upon this stock will widely extend the walnut area.

SWEET CLOVER—THE NEW HAY AND PASTURE LEGUME

HE first thing to be considered in starting sweet clover is the seed. The bulk of the demand has always been for the seed with the hulls removed, but there has also been much unhulled seed sown with splendid results, and in some ways it is considered by many to be superior to the hulled. There is a theory that the seed in the hull carries the inoculation for its plant, thereby giving a better growth the first year than would be obtained with the hulled seed on uninoculated soil. About 15 pounds of seed per acre should be sown, and once sown it will seed the land itself if given a chance.

As to the soil best adapted to its culture, there is no doubt that it prefers a limestone soil, but it is found in almost every part of the United States, growing in practically every kind of soil. Sand that has been in corn or other crops gives good results when the seed is drilled in the stubble after the crop is removed. It likes hard ground, even that which has never been plowed, no matter how rough or hilly, among the rocks and stumps, even among trees. Our experience is that it will grow just as well in partial shade as in the sun, and even in the

dense shade where grass has never grown it grows two feet high and matures seed, so it would make good pasture.

On hard clay or gumbo land it might be well to plow the land and broadcast the seed on the rough plowed ground, letting the wind and rain cover it.

Sweet clover likes a hard seed bed; don't plow loam or mellow soils without giving plenty of time to settle before sowing the seed. When the seed is disked, drilled or harrowed in, cover it lightly. Sow the seed so that it will have plenty of time to germinate.

We are satisfied that any process for hastening the germination weakens the vitality of the seed and is apt to make the plants so weak that many do not survive. In the summer or the early fall is the best time to sow the seed; in the winter or early in the spring next. We believe many of the failures with sweet clover are due to sowing the seed too late in the spring. The seed is naturally slow to germinate and the young plants are tender; although they stand almost anything in cool weather, the young plants are liable to die in hot, dry weather unless they are in the shade.

The value of sweet clover as a soiling crop was well known and appreciated in the east and south long before its many other values were known, and it has done wonderful things on the deserted tobacco and cotton plantations of the south. As a nitrogen gatherer it is ahead of all other legumes. Professor Hopkins, in his reports on investigations made in Illinois, says that an acre will yield 6.4 tons of dry matter, of which 228 pounds is nitrogen, and that the sweet clover grown on one acre will furnish as much nitrogen and humus as 25 tons of average farm manure.

Its large root system breaks up the sub-soil. These roots, decaying rapidly after the death of the plant, leave in the soil stores of nitrogen and humus and the sub-soil is perforated with holes that gather and hold moisture. The tops soon form a mulch on the surface that prevents evaporation. Thus sweet clover, unaided, practices what we call scientific farming. On account of its great root system, extending several feet under ground, it is a valuable fertilizing crop though the tops are pastured or cut for hay.

As to the feeding value of sweet clover, Prof. Roberts of the Kansas Experiment Station is quoted: "You may rest confident that the two plants, sweet clover and alfalfa, are most identical in chemical composition, when taken at the same stage and under the same conditions. Further, there is no doubt that if sweet clover is taken young enough, so that it is not too stemmy, it contains practically the same feeding value as alfalfa."—W. R. Haskell.

The Nut-Grower

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ORCHARD RESULTS

All kind of experiences mark the development of the pecan industry in the lower South. Mistakes, ill-advised moves, lack of skilled management and even questionable methods have been encountered by the non-resident investor, which has brought loss and disappointment to many; while others have achieved a measure of success well up to the confident predictions made ten years ago when the budded tree had been established in public favor. The resident planter, the southern farmer and the companies that have had proper management have largely escaped these drawbacks, however, and are making rapid progress in orchard development.

The constant call for authoritative data as to actual orchard yields and actual selling prices has led to various measures that might develop reliable statistics of orchard results from year to year, rather than the accomplishment of individual trees which some seasons produce large yields and find a fancy market. The investing public wants to know the commercial results of orchards. Of the many inquiries we have from time to time sent out for specific reports, the replies are so varied as to circumstances that any valuable tabulation is not yet available. The industry is new. There is not a commercial orchard of budded trees in the country that has reached full bearing, and it will be ten years yet before such statistics can be reliably tabulated.

It is none too soon, however, to begin making records, and the growers who will keep orchard records—as many are now doing with individual trees—will serve a most important and practical purpose.

In place of attempting any extensive tabulation at present, we propose to give some orchard records, such as will fairly represent the commercial doings of particular orchards. Only such orchards as are fairly representative under average normal conditions will be used in this series of reports. Computations will be based upon the acre as the unit and the individual supplemental reports for successive years will in time present an array of facts which are essential in the intelligent building of the business. We have on file full particulars as to the location and ownership of an orchard listed in this series, and any one who cares to make a critical examination will be furnished the information needed.

Our number one is an orchard of 25¾ acres, located in the Albany district and owned by the resident of a northern city. It was purchased from a development company, which cared for the property for a fixed period, but it is now and was at the time of the 1915 harvest managed by an employee of the owner. Part of this orchard was eight years old and part seven in 1915, and it is the crop and sales for that year that are given.

The seven year old trees produced an average of 16 3-10 pounds per acre. The eight year old trees made an average of 80 pounds per acre. The selling price was 35 cents a pound. The varieties were Schley, Stuart, Delmas, Pabst and Van Deman.

This works out \$5.71 per acre for the seventh and \$28.00 per acre for the eighth year. As the pecan needs to be about thirty years old before the period of maximum bearing is reached, the thoughtful investigator can draw his own conclusions as to the desirability of such an investment.

It is our purpose to make a subsequent issue of The Nut-Grower a walnut number and publish a variety of information designed to encourage a greater interest in this splendid nut than it now receives. We invite co-operation in assembling information for this issue.

The demand for copies of the Proceedings of the Nut Growers conventions has been steady and as the years go by they are treasured more highly. Present indications are that at least one more of the issues will soon be exhausted.

Since the advent of the chestnut bark disease increased attention is being given to the selection of varieties able to withstand the ravages of this disease. Recent importations from the Orient give promise of obtaining a resistant stock.

We are Going Out of Business at Cottage Hill

AND THAT MEANS WE WILL MARK OUR STOCK DOWN TO BARGAIN FIGURES IN ORDER TO CLOSE IT OUT EARLY

No matter where you are or how many trees you want, write us soon and you will save some money.

We have a fine line of pecans in Frotscher, Stuart, Schley and Moneymaker. A fine line of Brewton (blight proof) Pears, Jap Persimmons, etc. Orders booked now and shipment made when desired.

YOU CAN'T BUY FINER STOCK, SO GET BUSY WITH YOUR PENCIL TODAY.

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THE PENSACOLA SEED
& NURSERY CO.
Cottage Hill, Florida



WITH THE EDITOR AND HIS CORRESPONDENTS

CORRECTION FROM MR. HALBERT

Editor Nut-Grower:

I appreciate the publication of my article, "The Economy of the Pecan," in our interesting journal for March. So far as I know, this is about the first time this distinguishing and valuable trait of the pecan tree has been dwelt upon. The day is rapidly approaching when the surface of the earth will be needed by the human race for dual purposes, and no plant or tree will supply this need as well as the pecan.

I am writing to correct some errors your type caused which makes that paragraph unintelligible about the high prices obtained from the annual product of a single tree. Your type gave correctly the general sum which each tree brought in Mississippi, Louisiana and Texas, but failed to give the number of pounds each tree yielded, which should have read as follows: "The Mississippi tree bore 100 pounds, which sold for \$2 per pound, and the top was literally cut to pieces to sell for buds and grafts. The Louisiana tree bore the same amount of nuts and were sold for \$3 per pound, but sold no buds or grafts. The Texas tree bore 200 pounds (not 20 as your types stated) which sold at \$1 per pound and the tree was trimmed and the waste limbs brought \$50 more. Had the nuts from the Texas tree sold for as high a price as those from the Louisiana tree, it would have brought \$650 as an annual yield.

H. A. HALBERT,
Coleman, Tex.

The Northern Nut Growers Association will hold its seventh an-

nual convention at Washington, D. C., in the National Museum.

The pecan orchard is a good place to use the best and most practical implements for cultivating the land as well as working the trees.

The production of essential oils is growing in volume. This should interest pecan growers, in view of the prospective use of pecans in producing a high grade oil.

The South has long been recognized as a good hog country, not only because of its possibilities for large yields of corn, but also because of its adaptability to growing peanuts, the feeding of which has helped to give that section first rank in the cheapness of pork production.

Census reports show that the average value of fruit lands per acre is three times as great as that of farm lands, and that the income of fruit growers averages three times that of farmers. Since nut culture has several advantages over fruit culture, the revenues from such orchards should be correspondingly larger.

Live stock—especially hogs—continue to grow in favor as a by-product of the pecan orchard. As the trees become large enough to permit, the orchard is found to be available for dairying operations, which can be handled to advantage, thus taking care of the orchard expense so as to leave the nut crops as net profits.

Sweet Clover—the Southern winter-growing variety. The new hay and pasture legume. The greatest of all cover and fertilizing crops. Sow in summer. Booklet. Sample. HASKELL & HASKELL, Garden City, Kans.

5-3



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These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service.

Our outputs limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

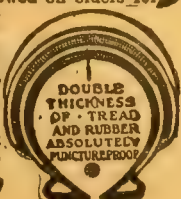
PRICES

Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60 \$2.80	38x4 in.	\$17.45 \$4.55
32x3 1/2 in.	10.85 3.10	38x4 1/2 in.	21.20 5.50
32x3 3/4 in.	12.75 3.20	38x4 3/4 in.	22.50 5.75
34x4 in.	15.75 4.20	37x3 3/4 in.	23.00 6.20
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land planted to 1500
paper shell grafted
pecan trees of the
best variety; 1400 or-
ange and grapefruit
trees; house, barn;
live stock included.
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pects. Over 100,000 nur-
sery trees coming into mar-
ket. Owner must have help
to move it and a bargain
awaits a good, wide-awake
hustler. Plenty of expert
help, so all the buyer needs
is a little cash and mana-
gerial ability. Address Op-
portunity, care The Nut-
Grower, Waycross, Ga.

THE NUT-GROWER

NUTS AS FOOD

The composition of some var-
ieties of nuts so closely resem-
bles that of meat that it is easy
for the trained cook to prepare a
a great number of entrees which
so closely resemble meats in ap-
pearance and flavor, as well as in
chemical composition, that meat
dishes of all sorts may be readi-
ly dispensed with without being
seriously missed.

Some years ago I was request-
ed by the Assistant Secretary of
Agriculture to experiment for the
purpose of endeavoring to pro-
duce from vegetable sources sat-
isfactory substitutes for meat. I
found as a result of my experi-
ments, that a combination of pea-
nuts and the gluten of wheat
could be made a preparation
which resembles meat so close-
ly that it is easily taken for pot-
ted veal or some other meat pro-
duct. These nut meats can be
prepared on a large scale at a
price far below the cost of pro-
ducing beef; besides having the
advantage that, while furnishing
to the body every useful element
that can be derived from meat,
they are absolutely free from tu-
berculosis, tapeworm and all
other forms of disease to which
flesh foods are more or less lia-
ble.

The one possible solution of
the food problem of the United
States, as well as the other dense-
ly populated countries, is to be
found in the return to the prim-
itive diet of man, which is still
adhered to by the chimpanzee,
orang-outang and the other an-
thropoids. The gorilla, as fierce
a beast as roams the forest, finds
in fruits, nuts and tender shoots
ample sustenance to support the
prodigious energy which he dis-
plays. The strongest of land an-
imals, the elephant, and that mar-
vellously fleet and enduring ani-
mal the reindeer, thrive on a
fleshless diet, as do, also, for the
most part, the teeming millions
of China, Japan, India and Cen-

tral Africa.—Dr. J. H. Kellogg.

THE WAYCROSS PECAN DISTRICT

By J. F. Wilson.

(Read at the 1916 meeting of the
Georgia-Florida Pecan Grow-
ers Association.)

The Waycross pecan district
includes about twelve counties in
the southeastern part of Georgia,
lying along the Atlantic coastal
plain and extending inland up-
wards of seventy-five miles. This
territory reaches from the Savan-
nah river on the north to the St.
Marys river and the Okefinokee

The Williams Pecan

A Recent Discovery

COMBINES MANY
DESIRABLE QUALI-
TIES. IT HAS SIZE,
THIN SHELL, AND A
PLUMP KERNEL, IS
A SPLENDID CRACK-
ER AND HAS AN EX-
CELLENT FLAVOR.

The tree is a vigorous
grower, a regular and
abundant bearer and is
resistant to disease and
insects.

Write for free leaflet giv-
ing the story of pedigree
and record of bearing as
written by the editor of
The Nut-Grower.

DR. W. P. WILLIAMS
BLACKSHEAR, GA.

A BARGAIN FOR SOME NUR- SERYMAN

37,000 PECAN TREES IN
NURSERY ROWS, AP-
PROXIMATELY HALF
BUDDED TO BEST VAR-
IETIES. FOR PARTICU-
LARS ADDRESS

I. W. SEAMAN, Waycross, Ga.

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**WHOLESALE
GROWERS OF**

**GRAFTED AND
BUDDED
PECAN TREES**

**SIMPSON
Nursery Co.**

Monticello, Fla.

swamp on the south and has South Carolina on one side and Florida on the other. It has long been known as the flat woods country and distinguished for its extent of sand and abundance of water which was formerly visible from the railroad trains passing through it. But as time passes certain changes have become noticeable. The virgin pine forest is about gone; the surface water is going as systematic drainage is extended; the sand is being carpeted with verdure, and farm crops and pecan trees are being substituted for the pines.

The introduction of the pecan into southeast Georgia will furnish the basis for a future story. Suffice it to say at present that seedling trees fifty years old are common on many of the early settled farms. These trees are fine specimens, bearing a variety of nuts, as to size and quality, and ordinarily good yields.

With the advent of budded trees a number of small orchards were planted at or near Waycross, the varieties being those propagated at Ocean Springs, Miss. These early orchards did not always receive deserved attention, but when given reasonable care proved profitable. About 1910 a marked change was noticed in the industry. Improved varieties were introduced and the orchard area began to increase. This revival, or new epoch as it may be called, was evidently due to a better recognition of the suitable soil and climatic conditions for this nut as evidenced by the rapid growth of trees and regular bearing of fine quality nuts. The claim is made by several close observers that land suitable for sea island cotton growing is especially adapted to pecans, and as this coast country is the home of the sea island cotton, it follows that its adaptability to pecans, if this theory is correct, is par excellent. While there are many evidences

to support this claim, it is not our purpose to prove the theory at this time, but merely to direct attention to the claim.

Before taking up in detail the mention of varieties, I wish to call attention to two matters of interest which are under investigation and will be reported later as further authentic data is assembled. One of these is the number and superior quality of promising new varieties originating in this section. The other is the superior size and quality of nuts from the standard varieties now being successfully fruited.

While we might treat our subject in generalities, we prefer to to localize at a few points the information presented. The names and postoffice addresses of actual growers are also given in order that anyone who so desires can confirm the statements. We eliminate from the consideration any reference to the writer's own operations and forego mention of various orchards and individuals, as those mentioned are fairly representative of the bearing varieties considered.

Schley holds a conspicuous place; is bearing in two of the three orchards used for this report. In growth of tree it is satisfactory; in yield, good for the age of the trees, and is marked by a greater uniformity and favorable size of nut than is common with this variety. Stuart is a good grower, a tree favored by all, but has no marked variation from its behavior elsewhere. Moncymaker is eclipsing its enviable Louisiana record for production and the uniformity in size is marked. Frotscher is a good grower, sets fruit well, but sheds its immature nuts to a considerable extent. Van Deman may be classed as normal. Other popular varieties are of more recent planting and bearing is not in evidence yet except to a limited extent. Teche, Curtis, Delmas, Success, Pabst and several oth-

ers are in these orchards and are making satisfactory growth.

Teche trees planted in the spring of 1911 by Mr. Snedeker produced some nuts the third year with increasing crops in 1914 and 1915. The crop in 1915 from trees of this variety was three pounds per tree. 463 nuts were produced on one tree; another had 458. As they run about 60 nuts to the pound, it showed over seven pounds per tree for the best yield the fifth year from planting.

In this same orchard the Curtis was next in early bearing and yield, producing about half the amount yielded by the Teche. Alley was third on the list.

The orchards that furnished the data for the older trees are those of Dr. W. P. Williams and Mr. A. J. Strickland, both of Blackshear, in Pierce county.

Within the next few years there will be an increasing amount of data in this line as the new orchards are reached—nearly two thousand acres in extent and practically all the modern varieties have been planted.

REPORT OF PECAN GROWERS' EXCHANGE

The National Pecan Growers' Exchange makes public the following report:

When the first board of directors was elected, there was little more than the legal right to begin work.

Up to this time, the affairs of the exchange have been handled with money received from membership fees, and the expenses of incorporation, together with all other expense, has been kept within practically this amount, a total of about \$135.00.

During the past summer a system of grading received more of the attention of the members than any other matter, and there was worked out a tentative plan covering the leading varieties, to enable the growers to grade the

crop of 1915.

Through the enterprise of Mr. J. M. Patterson of Putney, Ga., and his associates, a grading machine designed to meet the above plan was installed, together with a curing plant and some other machinery. Through the operation of this plant, we have accomplished some very satisfactory work, and with the experience gained many of our problems can be worked out within a reasonable time.

In addition to the work accomplished in handling Mr. Patterson's crop, there was gathered from a number of orchards sample lots of other nuts, and under the direction of Mr. C. A. Reed, of the Bureau of Plant Industry, assisted by some of our members, there was accomplished another set of records which will aid us very materially in our future plans.

At a meeting of the National Nut Growers Association at Albany last fall, there was an appeal made for a larger fund, to consist of individual loans covered by certificates of indebtedness, and to be expended for the purpose of carrying on the future work. There was pledged at this meeting, nearly seven thousand dollars, but when the first installment was called for several of the subscribers failed to make good, and there was collected the sum of \$544.50 out of the seven hundred called for. This money is still unused and will be retained for a time, in order that the plans of the exchange may be safely carried forward.

The annual meeting of the exchange was adjourned because there was no quorum, and this fact is mentioned to emphasize what has become clearly apparent to the members of the board of directors—that there is a very large amount of work to be done and a very few hands to do it.

We need the full and hearty support of every pecan grower

BUDDED AND GRAFTED ENGLISH WALNUT

and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butter-nuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES

THE NUT SPECIALIST

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5,000 Stuart Pecan Trees

6 to 9 Feet Tall

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of the whole country, and of the friends of these people. We need the backing that will guarantee us a safe passage forward, and we need now and will need more later on, a loyalty and unselfish support from those who are to be benefited by this work, that will carry us over the severe strains and the toil of the path which alone can bring us to our goal.

WHITE ANTS

Our common white ants, also known as wood-lice and termites, have been reported as injuring groves of pecan, walnut and other nut-trees. They usually enter the roots and are described as eating out the heart, rendering the limbs and branches nothing but hollow shocks. The injury is most severe to seedlings, especially of the first year's growth.

As a rule, white ants are most destructive in dry locations, and if the trees can be frequently drenched with water, the insects can be driven out. Where they have obtained a good foothold on trees, however, it is best to inject bisulphide of carbon into their nests.

A measure of precaution before planting pecans would consist of removing all old stumps, limbs and other dry wood in which these insects normally breed.

After treatment with bisulphide of carbon, fertilizers should be applied to enable the seedlings to recuperate from attack. Hot water has been advised as a remedy, but if employed it should be used with care.

WM. P. BULLARD

Among those who will be influential and prominent in the approaching convention of the National Nut Growers Association will be the secretary, Mr. Wm. P. Bullard, of Albany, Ga. It comes only to a very few persons to fill the office of secretary

of such an organization, where the skill, initiative and character of the incumbent counts so largely in shaping and directing operations fraught with momentous horticultural and commercial results.

It is only about seven years since Mr. Bullard became a resident of the pecan belt and identified himself with the industry, so that a sketch of him at this time serves a good purpose in making the public better acquainted with him, as well as affording a pointed illustration of what the industry offers to the men who apply the methodical measures he used in entering in what to him was a new field of activity and which have so rapidly advanced him to the high position he now holds.

In 1909, Mr. Bullard, who was then residing in Chicago, gave up the practice of law on account of ill health. For a number of years he had closely followed that profession with satisfactory results, and those who knew him recognized him as a gentleman of the highest ability and integrity and a hard worker.

His professional experiences laid the foundation for the success which has attended his efforts in the field of pecan culture. A systematic study of every problem met with there, from various and opposing viewpoints led him to reach correct conclusions on which his operations were based. This process of reasoning enabled him to see the merits of the pecan proposition, which appealed to his deliberate judgment and resulted in well-directed action.

Mr. Bullard became a subscriber to The Nut-Grower and joined the Association at the now historic convention held in Albany in 1909. He has been a factor in all of the movements which have resulted in making Albany a Mecca for pecan investigators. He has, since locating at Albany,

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been actively engaged in nursery and orchard work, giving to every operation that essential study that counts so much for success. He has been generous in giving the public the results of his observations and experiences with the pecan. He is a firm believer in the efficacy of judicious publicity for the pecan and gives effect to his convictions by practicing to as great, if not greater, extent than any individual in the ranks of pecan growers systematic methods, at his own expense, for educating the public to a correct appreciation of the merits of that nut.

An enumeration of his official connection with the organized pecan movement in the southeast shows his activity, and how large a part of the burdens he is carrying for the advancement of an industry which he recognizes as of commanding importance to the favored territory in which his lot is cast. In these organizations his initiative and ability as an organizer is readily recognized and his skill in handling their operations has been stepping-stones to the position he now oc-

cupies in the national body. He is president of the Albany Pecan Exchange, a local body that has served that territory well in different ways, but more particularly in maintaining an exhibit of nuts and things pertaining to the industry. He is also secretary-treasurer of the Southeastern Pecan Nurseryman's Association, and vice-president of the Georgia-Florida Pecan Growers Association, a body second only in importance to the national association. During the past two years he has been secretary of the National Nut Growers Exchange, the purpose of which is to perfect a system of co-operative marketing of pecans and last year was elected secretary of the national association.

NUT BREADS

Somebody sent Editor Jerger, of Thomasville, a piece of nut bread, and he did eat of it, and in his paper the next day he pronounced it good.

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only delightful to the palate, but very nutritious to the body.

There are several ladies of our acquaintance in Albany who excel in the art of making nut bread. There are three or four popular formulas or receipts. Sugar and seeded raisins are used in one of the formulas, but the nut bread that appeals strongest to us is made of pecan nuts and flour alone, with enough baking powder to make it "rise" and give it the light fluffiness of a loaf of baker's bread.

Recently some of our Albany ladies have been conducting what they call a "Saturday Market." At some convenient place they assemble all sorts of good things to eat which are prepared for the convenience of housekeepers on Sunday. At these Saturday markets, nut bread has become a standard commodity, and it "sells like hot cakes."

The possibilities of the pecan nut in the preparation of the family meal are just now beginning to develop in our Southwest Georgia homes. In due time, however, we will all be extensive nut eaters, and will be the better off for it.—Albany, Ga., Herald.

NEW PECAN COMPANY

A few miles west of Waycross, Ga., on the line of the Waycross & Western railroad, a substantial start has been made in planting pecan orchards. The Sessoms Land and Securities Company and the editor of The Nut-Grower are co-operating in the movement which insures for the enterprise ample financial support and skillful direction of the orchard development.

If the selling arrangements prove satisfactory, the area to be planted within the next few years will aggregate several thousand acres. The initial planting is located at Crews, while a larger tract at Kineva is slated for the next planting season.

Tree Growth in Blasted Ground

(Continued from page 66)

til the roots were exposed above the ground, simply because the hard ground beneath offered no opportunity for root penetration.

There probably are a good many soils that will not be benefited much by blasting, particularly if the blasting is not immediately followed in the right way with heavy-rooted cover crops. But these soils do not often occur in the fruit growing sections, for there are problems in moisture storage and in the making available of insoluble plant foods which the blasting helps to solve, and these problems are present in clay and loam, and highland and lowland alike.

As for length and thickness and number of the twig growth of the trees, I personally can bear witness to the fact that in blasted ground there is every reason to expect superiority. In only a half dozen instances out of a hundred that I have seen have the trees failed to make huskier, bigger tops in blasted ground. It is the rule, rather than the exception, to see whole blocks of one thousand or ten thousand trees so planted, show an average growth of eighteen or twenty or twenty four inches in a season, and alongside of this I reflect that on similar soils I have seen many orchards planted with inferior tillage, that would average only seven or eight or ten inches in twig growth in a season. It is only fair to say that I have seen a few orchards in light, sandy soil, and in very heavy soil, where blasting apparently did no good, or even did harm. The sandy soil seemed to lose in moisture-holding capacity by the blasting. The clay seemed to hold water around the trees too long.

There may be some question about the value of blasting an open, fertile soil, but there can be no question at all when there is

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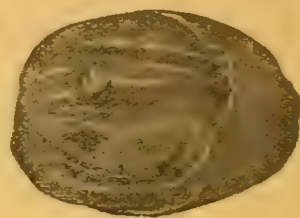
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NUT BUTTER TO BECOME POPULAR

Comments in a recent issue of the Malayan Tin and Rubber Journal indicate that many people believe that after the war there will be a big demand for cocoanut fats. They argue that a large number of the dairy cows on the continent will have been destroyed and the manufacture of butter from animal fats accordingly restricted.

Nut butter has been gaining in popularity, and if, through force of circumstances, people place it upon their tables instead of animal-fat butter, the cocoanut industry will be benefited. The markets of Germany and Austria are, of course, closed to the industry. Large quantities of copra have been exported during recent years from the British possessions to Germany and Austria-Hungary. In 1913 the imports of copra into Hamburg from all sources amounted to 230,395 metric tons, of which 124,434 were from British possessions.—Daily Trades Report.

Crimson clover is making good in pecan territory when given proper attention. It is important that the seed should be sown in September in inoculated soil.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

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The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XV

June 1916

Number 6



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GEORGIA-FLORIDA PECAN GROWERS MEET

The first decade of the existence of the Georgia-Florida Pecan Growers Association has been rounded out with a history that in some particulars is unique. While pertinent subjects have been discussed from year to year, and while one meeting is much like its predecessors, conditions are now much in contrast with those of the early gatherings, both in the personnel of the membership and in the ability and experience which make up the ensemble of interesting features. The recent gathering was not remarkable for the large attendance, which on some occasions was larger than that at the concurrent gatherings of the national association, but what was lacking in numbers was fully compensated for in the character and variety of the papers presented. While the Old Guard was well represented on the program there was quite a goodly sprinkling of newer members with able papers of much interest, presenting well prepared data from new viewpoints.

It was noticed also that there was a number of breaks in the published program. In several instances, where members were prevented from attending, their papers had been sent in and were read by the secretary. The range of subjects presented were out of the ordinary, and showed evidence of careful selection, not only of the themes but of the speakers to prepare them. With few exceptions, these speakers had carefully written out their addresses, thus making them available for wider use. Several of them will appear in The Nut-Grower as space permits.

In the national association meetings in recent years there has been an increasing number of ladies in attendance. This same tendency was manifested at this

(Continued on page 89.)

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THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., JUNE 1916

NUMBER 6

A PROMISING PECAN

IN the Waycross pecan district, Pierce county, which is separated from Ware county on the northeast by the Satilla river, figures largely and favorably with modern and profitable orchards. It is also bringing to public attention some new varieties of attractive character.

It is our purpose in this article to write a brief story of Pierce County's Williams Pecan. We say "Pierce County's Williams" because there is another pecan of much merit that bears the same name. However, the prior right to the name is claimed for the nut of which we write. The story as given by the discoverer and introducer, Dr. William P. Williams, of Blackshear, is full of interest, because it traces back to the purchase of the seed nut and has a recorded history for the past four seasons.

In this connection a brief sketch of the pecan industry in this section, with some data regarding the district's adaptability to pecan culture may serve to add interest to our story. The introduction of the pecan into Southeast Georgia, however, will furnish data for a subsequent article. Seedling trees apparently fifty years old are common on many of the older farms of the Waycross district, and they are fine, healthy looking trees, bearing a variety of nuts as to size and quality, with fairly good yields. With the advent of budded trees a small number of orchards were planted at and near Waycross, the varieties being those propagated at Ocean Springs, Miss. The early orchards did not always receive the attention they deserved, but when they were given reasonable care they proved profitable. About 1910 a marked change was noted in the industry. Improved varieties were introduced and the orchard area began to be largely increased. This revival, or new epoch, as it may be called, was evidently due to a better recognition of the suitable soil and climatic conditions for pecan culture, as evidenced by the rapid growth of trees, the regular bearing of nuts of fine quality and the uniformly healthy condition of the trees. While there are large areas of suitable pecan land in southeast Georgia, it has been observed that a considerable belt, which embraces a large portion of Pierce county, and which is known as the Sea Island cotton belt, was producing pecans of the standard

varieties, which were unequalled in size and plumpness of kernel by those grown in many other and better known localities. Records also showed exceptionally early bearing, while indications pointed to large yields and regular crops. These recognized conditions furnish favorable environment for the production of new seedlings worthy of attention. Various large and fine-looking specimens have come to notice from time to time, but as is common with the large, long, nuts, the kernel was often defective. The advent of the Williams, however, is more of the character of a development than simply a chance seedling with no known pedigree.

In 1903, a few Frotscher nuts of uniform character were procured by Dr. Williams from Mr. J. B. Wight, of Cairo, Ga. These were used as seed nuts and were planted on about half an acre of land in squares, where the twelve or more resultant trees now stand in orchard form. Some of these trees began bearing in 1911, or eight years from the seed. Among the early fruiters was the Williams. Practically all of these trees have now fruited, with as many different nuts as there are different trees. No two are alike and only two show resemblance to the Frotscher, although several are as large as the parent nut. One is scarcely larger than a chinkapin, but the Williams is one of the rare exceptions that prove the rule that pecans do not produce nuts from the seed equal in size and quality to those planted.

The size of the Williams first attracted attention on account of its size. This was in 1911 when the first crop totalled 40 specimens with an average weight of 49 nuts to the pound. In 1912 the crop was 160 nuts which ran 40 to the pound. The 1913 yield was 395 nuts which were somewhat lighter than those of the previous season, as they averaged 43 to the pound. In 1914, a favorable year, there was a marked increase both in the size of the nut and the yield. There were 1584 nuts that season and the crop run was 36 to the pound, while in 1915 the crop run was 36 to the pound, while selected specimens ran 29 to the pound. Thus the

tree, in its thirteenth year from the seed, produced 44 pounds of nuts in one crop. In 1915 the general crop of pecans was much below normal, but the Williams tree, although showing the effects of unfavorable conditions, continued to furnish a good record, 610 nuts, but owing to the dry season they were small enough to require 50 to the pound.

With this initial bearing record, the character of the nut and habits of the tree become of peculiar interest. In form the Williams is oblong, like most large nuts, but is markedly different from the ordinary large specimens in being well filled. Tests made in 1914 showed only 8 per cent of faulty specimens, while in 1913 only 5 per cent were defective. The shell is distinctively thin and the cracking character ideal, while the quality of the kernel ranks high. The nuts are produced in clusters that average five to the twig, while seven are not uncommon. Thus far, the tree has not failed to bear since it began in 1911. The nuts are quite uniform in size and in this particular are surpassed only by Moneymaker. While scab has been present in this orchard, the Williams has shown only a slight susceptibility to the disease. While the work of the

case bearer was quite evident on various varieties, a single row of trees top-worked to the Williams were so free from this insect that the foliage was in marked contrast with adjoining rows. Vigorous and uniform growth of the tree is a marked characteristic of the variety, while the early bearing of top-worked trees correspond closely to the early bearing of the parent seedling. Trees top-worked to this variety in 1912 and 1913 produced nuts generously in 1915.

These traits and characteristics are those that go to make a desirable commercial variety. Quality, size and easy cracking make an ideal combination. Then when this is supplemented by a vigorous tree, exceptionally free from disease and insect depredations, with early, regular and abundant bearing qualities, producing a uniform grade of nuts, you have a combination which, to say the least, will prove not only attractive, but valuable as well.

How well the Williams will do in other localities remains to be determined, but it certainly merits a trial all along the Gulf coast country.




PECAN SOILS OF THE GEORGIA-FLORIDA SECTION

By J. WILLIAM FIROR

Adjunct Professor of Horticulture, University of Georgia

Read. at the Georgia-Florida Pecan Growers' Convention

 AM assuming that what is meant by the Georgia-Florida section is the part of Georgia lying south of the fall line and the northern part of Florida. The fall line is the line which divides the coastal plain from the Piedmont and, roughly outlined passes through Augusta, Milledgeville, Macon and Columbus. At least, by limiting the section to this area, discussion is simplified, as all of it lies in the coastal plain. Of course, what is said of this section will apply to the entire coastal plain generally. The similarity of climate throughout the Georgia-Florida section makes that a constant factor also and it will not be mentioned further.

The original tree growths were long leaf pine on the well drained soils, excepting on the deep sand ridges where the scrub oak eked out an existence, and magnolias, gums, cabbage palmettos, gall berries and cypress on soils of poor drainage. Hickories are also found, mostly on the limited area of heavier soils. Although the pecan is not native to the section and its closest kinsmen are the hick-

ories, yet, in the commercial development of the pecan industry, this is the section that has taken the lead.

In the olden days men were wont to judge soils by the original growths. The Friends, in their advance from the sea coast back into the wilderness of America, sent on ahead, in all directions, their young men to scout and explore. They were instructed to notice particularly the size of tree growth. Wherever they found the largest trees, there is where the richest soil should be and there is where the Friends desired to settle and build their homes, reasoning, no doubt, that no agricultural people can be richer than the soil that they farm. The original growths, in a general way, indicates the possibilities of the soil. There is always danger, however, in following general principles specifically, without taking into consideration unusual factors. A swamp in South Georgia produces three foot cypress trees but the swamp is not suited to the production of cotton

or pecans. In this particular case the lack of drainage is all that stands in the way of the soil doing its part in the production of these crops. Simple and possibly trite as this illustration is, I believe it shows at what I am driving. And so it may be said of many soils that they miss being adapted to pecans or some other crop by the narrow margin of one factor. This factor may be the absence of one plant food or too much moisture or the presence of a hardpan. Since any of these factors can be corrected, in considering what are pecan soils in the Georgia-Florida section a soil is not barred so long as any undesirable factor is capable of being corrected economically.

Of course, there is no such thing as a perfect soil. All soils need treatment. In determining what are pecan soils in the Georgia-Florida section, the line of demarkation will be drawn between soils which have sufficient natural fertility and suitability to justify treatment and those on which labor must be expended excessively before they will produce a good orchard.

The wild pecan of Texas and the Mississippi basin is found on the rich river bottoms, or what the soil experts call flood plains. This particular kind of soil is very scarce in the Georgia-Florida section. It is well provided with fertility and moisture, yet it is not swampy. To move the pecan to higher land and to place it on markedly different soils would seem bad practice. Yet this has been done and the extent of the plantings and the productivity of the trees have sufficiently justified the undertaking.

In its native home the pecan shifted for itself. It may be that the soil conditions there were splendidly adapted to the pecan when it had to fight for an existence in competition with insects, diseases and other trees. We know that the wild nut is not desired for orchard conditions. And since the orchards of the future will be planted to budded varieties, it may be that the pecan will reach its greatest development away from its native home. From the standpoint of a grower in the Georgia-Florida section, we are not interested in the wild pecan, nor are we interested in the pecan shifting for itself. We are willing to give it the needed attention, if in return it will give us an abundance of salable nuts. Furthermore, we are interested in the soils best adapted to the pecan and if these soils have correctable faults, they will be corrected. We are also interested in the soils least adapted to the pecan, so they can be avoided. As long as there is an abundance of soils well adapted, it would seem to be a mistake to plant on those least or not at all suited.

The soils of the Georgia-Florida section are divided into sands, fine sands, sandy loams, fine

sandy loams, silt loams, clay loams and clays. It will be noticed by this division that the grouping is done according to the size of soil particle.

The sands are not adapted to pecan culture; especially is this true of the deep sands, as the black-jack ridges, and unless they are underlaid with a heavy subsoil they are not recommended. In case there is a small section of sand in an otherwise desirable orchard, it would seem well to plant in the sand and with extra care fair trees can be produced.

The fine sands are more retentive of moisture than the sands, but often are poorly drained. They are also not to be recommended for pecans, although they are not as undesirable as the sands.

The sandy loams are the lightest desirable soils for pecans. There are many types of sandy loams and they are very difficult to separate. But allow me to give you two well known types, the Tifton sandy loam and the Norfolk sandy loam, and a good idea of all the sandy loams in the Georgia-Florida section will be had. The Tifton sandy loam is known locally as "pimply" soil. It has a gray or grayish yellow surface soil, with iron concretions or "pimples" distributed through it. The subsoil is a yellowish sandy loam, becoming heavier with increasing depth. This is an excellent pecan soil, being fairly fertile, although lacking in phosphoric acid and humus, and is nearly always well drained.

The Norfolk sandy loam is very similar to the Tifton, but more variable in depth and strength. It has a gray surface soil and a yellow subsoil that increases in heaviness with increasing depth. It is also excellently adapted to pecan production when well drained. After cropping for a number of years it usually shows a deficiency in nitrogen and humus and the phosphoric acid content is naturally low. These two types, which are well known throughout the Georgia-Florida section, are representative of the sandy loams. And it may be stated that with a few exceptional types, these sandy loams are all adapted to pecans. One of the exceptions is the Susquehanna sandy loam. This type is underlaid by a sticky, impervious clay sub-soil.

The sandy loams, in connection with the similar group of fine sandy loams, make up one-half of the soils of this section. Deducting for the types that are underlaid with heavy, sticky, impervious clays, we will still have nearly fifty per cent of the soils of the section of these two groups alone adapted or can readily be corrected, so that they will be adapted.

The silt loams, clay loams and clays are not very extensive. But whenever they are well drain-

(Continued on page 86.)

The Nut-Grower

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The 1916 convention of the National Nut Growers Association will be held at Jacksonville, Fla., Wednesday, Thursday and Friday, November 22, 23 and 24.

The admirable paper on intercropping by Mr. A. S. Perry, of Cuthbert, Ga., which appeared in a recent issue of The Nut-Grower, has been reprinted in leaflet form and copies can be obtained by request to the author.

Service to our subscribers and advertisers is the mission of The Nut-Grower. In order to make this service effective, we need to know the troubles encountered by our readers or the nature of the information they desire.

H. W. Smithwick, of Americus, Ga., is an advocate for birds in the orchard for controlling insects. His practical suggestion is that accommodations be furnished for martins. They will occupy suitable houses and are inclined to colonize if given encouragement.

The Northern Nut Growers Association will hold its seventh annual convention at Washington, D. C., Friday and Saturday, September 8 and 9, in rooms 42-43 of the new National Museum Building. Horticulturists, nurserymen and the public generally are invited to attend.

In summing up the cost of an orchard there are several things to be considered, even after the investment has been made by paying for the orchard. Taxes are ever to be considered, varying in

different parts of the country. Interest on the investment at a rate equal to what the investment should yield in ordinary channels should be charged against the orchard. Labor to properly cultivate and care for the trees is necessary, as well as fertilizers, and then the gathering and marketing of the crop is sure to come out of the selling price of the nuts. It is what is left after meeting all necessary expense that furnishes the profits.

PECAN SOILS OF THE GEORGIA-FLORIDA SECTION

(Continued from page 85.)

ed and properly located, they are well suited. These heavier soils are mostly very fertile.

Taking the soils of the Georgia-Florida section as a whole, I would say that over fifty per cent are suitable or can readily be made suitable for planting to pecans. This means that the sands and fine sands are discarded and that some of the types of other groups are objectionable. In making up this estimate I am dealing with the potential ability of the soils and notwith their immediate and present productiveness.

A general knowledge of soils is of value. This is especially true for the novice and the new-comer. The condition of the crop growing may be misleading, as it may have been produced under conditions very favorable and with excessive fertilization. The appearance also may be misleading, as it may seem to be dry when it is only waiting for a good shower to be turned into a veritable pond. Those who have pecans planted through a knowledge of soils can often correct some little fault that means a great deal to the trees. Those intending to buy land may save themselves money and disappointment by learning soils.

However, when it comes to a study of types and groups the tendency is to chuck all that as foolishness. It seems to be too difficult. One becomes lost amid the mysteries and technical differences of Tifton sandy loam, Orangeburg fine sandy loam, Greenville gravelly loam, and so on. You look up the analysis of some one type and on hunting up that type on your neighbor's farm, you see the growth out of all proportion to the plant food content as indicated by the analysis. Then you take a type with a high plant food content and look it up on your own farm and find a poor growth. But this is not the fault of the soil nor of the analysis. An exceptionally fine pecan grower could possibly grow a fair or even a good orchard on a deep sand, while a poor grower might find his orchard doing miserably on the finest Tifton sandy loam.

(Continued next month.)

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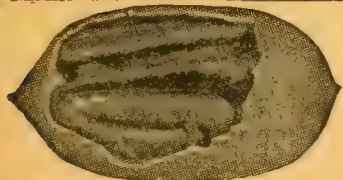
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PRESIDENT'S ADDRESS

At the Georgia-Florida Pecan Growers Convention

By C. A. Simpson.

In the year 1907 I became interested in the pecan industry. In that year I no doubt tried the patience of several good men in this audience by writing to them and asking various foolish questions. But what else could I do, if I wished to become informed? At that time I was in Chicago, one thousand miles away, and all I then knew about the pecan industry was what I had learned during my boyhood days at Vincennes, Indiana, and that related only to gathering the nuts in the fall in the bottom lands of the Wabash river. And I assure you, the gathering of the nuts was quick work, if not of the most approved method. It consisted of two men using a cross-cut saw, and after the tree had fallen we boys would gather the nuts. Such a waste! A fine, majestic tree, loaded with the best of nuts, which had probably been growing for a hundred years, totally destroyed in a few thoughtless moments.

Almost up to the present time most of our discussions at these meetings have been of the future. I am glad to be able to say that we are now rapidly approaching the second stage of progress in the pecan industry, and we can now begin to discuss what we have accomplished. You will note I say, "begin to discuss," for there are still many vexed problems unsolved.

Among these unsolved problems may be mentioned, the best method of cultivation, intercropping and fertilization to be used in an orchard to get the best and quickest results and yet keep within a reasonable expenditure; why it is seemingly impossible to make all trees in a large orchard produce equally

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and with the same prolificness with similar treatment; what is the best method of gathering, grading and curing the nuts; and no doubt each of you could add to this list.

I think we are making good progress along all of these lines. I firmly believe the quicker we get plenty of humus incorporated in the soil and use a winter cover crop, the sooner we will overcome many of our problems.

However, there is one problem that is as yet unsolved, and one that humus will not help, and that is, "What is the best method to market the thousands of pounds of high grade pecans that we are just beginning to produce on a commercial scale?" Does not the immediate future of the whole pecan industry rest on the proper solution of this problem? If we are not capable of selling the un tcora isptnti etaoi ietaoin the nut crop as it increases from ytaeoarery eao inetaoi shrdluea year to year—and the increase will be very large in the next few years—we will do ourselves and the industry more harm than most of us now realize. No doubt there is an increasing demand on the market for pecans, but what method are we to use to reach that market and yet procure a proper price for our nuts?

This, we hope, will soon be solved by the National Pecan Exchange, and I trust when the paper is given on this subject this afternoon that you will not only give it your closest attention, but that you will support that exchange liberally, financially, if you have not already done so. "United we stand, divided we fall."

PECAN EXCHANGE ISSUES BULLETIN

The Ntional Pecan Growers Exchange, with headquarters at Albany, Ga., has issued the following bulletin:

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avenues for the disposal of the 1915 crop and also the crop of 1916.

"Please advise us by return mail as to the number of pounds of each variety you have on hand.

"If a sufficient aggregate volume of nuts is disclosed by this bulletin to justify this exchange in putting into operation a selling organization then there will be sent to you a circular stating the terms and conditions upon which this exchange would be willing to receive the nuts you have on hand.

"Our object in sending out this bulletin is to ascertain how many nuts of the 1915 crop are unsold and must determine whether this exchange can be of real service to nut growers at this time. Please reply promptly as to whether you have any pecan nuts for sale."

GEORGIA-FLORIDA PECAN GROWERS MEET

(Continued from page 82.)

meeting and at come of the sessions they constituted about a third of the audience. They evinced a lively interest in the papers and discussions. This is a favorable endorsement of the merits of the pecan.

The mayor of Thomasville, in welcoming the convention, spoke highly of the nut growers, basing his argument on the beneficial and permanent character of their work. The Methodist minister who offered fittingly the invocation conveyed the impression that the organization was capable of doing great and good things and invoked for it divine guidance.

A rather novel feature of the convention was the report of the secretary who submitted the minutes of a previous meeting and insisted on reading them. Later the same official who is also the treasurer, made a financial report, which was remarkable in that it showed a cash balance of about a hundred and fifty dollars

on hand. This was a surprise, doubly so, in such an association having cash on hand, and also because the members could not recall the time when the various treasurers had ever made a previous report. It was recalled, however, that the officers had not been remiss in collecting the annual dues and that the privilege of voting depends upon the member's good standing. Then as there had never been any expenditures aside from small printing and postage bills, it became apparent that funds had simply accumulated.

Space will not permit of a detailed synopsis of the papers read. We prefer to give entire such of them as we think most timely and valuable to our readers, and will refer from time to time to some of the discussions editorially. In the routine business of the convention there were some departures from custom. Officers were re-elected in the usual way on the recommendation of a nominating committee. The committee on resolutions was either ahead or behind the dominant sentiment of the convention, as about half of their resolutions were laid on the table. Of those adopted, two were simply the compliments usually voted, another directed that the standing committee of statistics "assemble and tabulate annually information as to the acreage planted and crops produced in our territory." Another read as follows: "Resolved, That this association, through a special committee, adopt and persistently use a suitable slogan that will attract attention to and educate the public in appreciation of the superior merits of the pecan."

One of the resolutions laid on the table grew out of the discussion following the reading of a paper which outlined the need of legislation for the commercial protection of nurserymen. The matter was referred to the com-

mittee on resolutions. They subsequently submitted the following: "Resolved, That a special committee be appointed to consider carefully the desirability of securing such legislation in Georgia and Florida as may serve to protect the commercial interests of members, especially nurserymen, and that this committee confer with other organizations equally interested." Objection to the resolution was made because of its being of the nature of class legislation and in favor of the nursermen, who were supposed to be able to take care of themselves.

The vote to table was carried by a small majority and incidentally shows one or the other of two conditions, which have not previously been determined in a parliamentary way. In times past it has been claimed that pecan nurserymen dominated not only this organization, but the national association as well. Whether or not this has been the case in the past, this vote indicates that other interest now dominate. However, since the resolution only called for an investigation of alleged conditions, the rather drastic action does not seem to have been required.

Another tabled resolution provided for the appropriation of \$25 for printing in leaflet form as many of the convention papers as practical for gratuitous distribution by members. Prior to the report of the committee on resolutions, a motion had been passed authorizing the loan of \$100 of the accumulated funds to the National Pecan Growers Exchange. This depletion of the surplus was supposed the reason why the smaller appropriation was shelved. This gives color to the presumption that is the National Pecan Exchange, rather than the nurserymen, that guides the operations of the organization.

The practical and scientific work of the convention was dis-

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tinctly meritorious and merited many times the attendance. As the papers gain a wide circulation through our columns and reprints they will prove valuable to the industry.

FIGHTING THE BOLL WEEVIL WITH NUTS AND FRUITS

(William P. Bullard, Albany, Ga., at the Cuthbert, Ga., Chautauqua.)

For the past half-dozen years we have heard much about the cotton boll weevil. Our State Entomologist has been especially busy. He together with our Commissioner of Agriculture, has been industriously securing and disseminating knowledge of that dreaded insect that so threatened the prosperity of the major portion of Georgia. These officials made repeated trips to the southwestern states that were stricken and recovering—some of them more prosperous than ever before—and then they toured our state, distributing literature and holding meetings in the effort to arouse the people to a proper sense of the danger that threatened us from the west. We hear a good deal about preparedness these days, but that was a campaign of preparedness worth while. Instead of planting heavy cannons and rapid-fire guns and building impregnable fortresses along the frontier of Alabama; instead of conscription and making every town an arsenal, our alert state officials sought to fortify our farmers with newer and better methods and new and different crops. This was called diversification, and everywhere we have heard the admonition, "Go ye and do these things that we teach and then the boll weevil will be a blessing in disguise."

Now, this rather ambitious phrase, "a blessing in disguise," may not exactly appeal to every one; most people do not want

to be knocked down just to be assured in felicitous terms how good it is going to feel when it quits hurting. In other words, they do not want their blessings incog.

For my part, I am glad to welcome the boll weevil. It means, if I mistake not, the elimination in large part of that infernal obstacle to prosperity, the negro cropping and renting system, which leaves the land more impoverished at Christmas than it was at New Year's. And it means not only rotation and diversified crops, but better farming methods among the white farmers. The cotton belt system has been, to begin to prepare for the season's crops after January 1st. By that time the grass and weeds needed for humus in the soil has been either burned or blown away; it is gone. In 1906 the leading exponent of arboriculture in the United States estimated that in the then past 85 years the state of Florida had suffered the staggering loss of \$3,400,000,000 by burning over the wood lands to secure clean grazing tracts for cattle. One of the sure ways to beat the boll weevil is to begin plowing early early in the fall and turn under deep all this humus material; this not only buries the weevil too deep for resurrection, but puts the soil in better tilth and enables the millions of bacteria already in the soil to get early to work on this humus so that it is all worked over—eaten up—and the soil made more fertile for the coming crops.

The great bugaboo about the wornout soils of the cotton belt that we hear so much about means nothing more than the lack of this better tilth, the lack of this absolutely indispensable humus in some form or other. Commercial fertilizers are a crop stimulus solely, and add no permanent fertility to the soil. Permanent soil building can be

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done only by adding some form of humus—manures or other dry or green stuff incorporated with the soil.

But, you may ask, what has this to do with your subject? Simply, this: you cannot successfully fight the boll weevil or the poverty weevil or any other kind of weevil with nuts or fruits without fertile soil. If not fertile to begin with, then it must be made so. And the more you make it properly fertile, the more you feed your trees, the more they will feed you.

One of the chief faults with the southern planter, be he white or black, is that he farms too much on the extensive, rather than on the intensive plan. He tries to run from a third to a half more acres than he should; but the successful farmer is the man who aims to make ten acres produce as much as twenty formerly did. And this applies to orchards. Better, far better, have a few trees and give them ideal care than to have many and be able to give them only a "lick and a promise."

Of all the forms of agricul-

ture there is not one that offers more hope of gain than fruits; and when I use the term fruits I mean to include nuts, as that is their proper classification. Time was when fruit culture was limited to the small farm orchard of five or ten acres; but now there are commercial orchards of large area cared for on the intensive plan. But this should not deter the average farmer from having a few acres in his home orchard devoted to a variety of fruits that would grace his table, fill his pantry and yield a revenue that would pay fine interest on the investment. My specialty is pecans, but in my home orchard I have all of the best varieties of peaches, plum pears, grapes, figs, pomegranates, Kumquat and Satsuma oranges in protected places; and we not only have an abundance of fresh fruits for eat but enough to can and, in addition, each year sell of the surplus enough to pay the entire original cost; in other words, 100 per cent every year on the investment in addition to having and abundance of fresh fruits for home use. Every farmer can and

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should do this as it means not only healthier living but some profit and a saving on the grocer's bills. With the exception of a few articles, the farmer in South Georgia can produce everything that is on the grocer's shelves that is needful; and in times of stress can produce everything that is actually needful. Thus equipped, the farmer can be, and should be as independent as a lord.

When it comes to profit there is nothing, in my opinion, that is comparable with the large thin shelled pecan. King Cotton is not in the same class with it. I have a pecan orchard which I confidently expect will pay me a good rate of interest on a valuation of \$1,000 per acre ten years after planting; and for ten to twenty years thereafter it will increase in bearing. How does this compare with ten or twenty or thirty years of cotton? And it is a long-lived tree, a monarch of the forest. Pecan trees have been felled that show from their rings of growth to have been more than 500 years old. The nut is not perishable; if kept in a cool even temperature it will preserve for ages in perfect flavor. The industry will never be overdone. When properly advertised, the United States alone will consume all we can produce. It is not grown abroad to any extent, hence is capable of a large export trade. It is not only a delicious but a healthful food. Doctors prescribe them in some cases. They healed a judge in Georgia of an obstinate stomach ailment when medicine and travel had failed. They can take the place of meats. In large cities there are restaurants where nut steaks are served to the exclusion of meats. Dr. J. H. Kellogg and his Battle Creek Sanitarium are famous; they are known to nearly every man woman and child of our land. Under date of December 9, 1915, Dr. Kellogg wrote

me as follows:

"You ask my opinion of the pecan. I regard it as one of the very finest of nature's choice products. A pound of pecans contains more nourishment than any other known food. A pound of pecans contains as much protein as half a pound of meat, as much fat as three-fourths of a pound of butter and as much starch and carbohydrates as one-fourth of a pound of bread, so a pound of pecans is the full equivalent of a pound and a half of other highly concentrated food. In comparing total values, a pound of pecans is worth, in nutritive value, two pounds of pork chops, three pounds of salmon, two and a half pounds of turkey or five pounds of veal.

"An acre of land planted to pecans will produce from four to ten times as much nourishment as one used for pasture. In the next century nuts will largely, if not entirely, take the place of meats on the bill of fare and the pecan will assume its rightful place at the head of the list of nourishing and digestible food-stuffs."

Not long ago our State Entomologist wrote me that in his opinion, "pecan growers of south Georgia had the finest horticultural proposition in the United States." This is a most sweeping statement from so able a man as Mr. Worsham.

Prof. W. N. Hutt is horticulturist of the state of North Carolina; he is president of the National Nut Growers Association and president of the American Pomological Society. He is intensely interested in pecans and has experimental plantings on the North Carolina Test Farms in Pender and Edgecomb counties of that state. Last month he wrote to one of the nut journals as follows: "The seventh year there were 50 pounds of nuts gathered from the 300 trees. The eighth year the bloom was so

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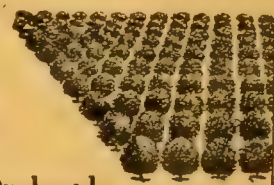
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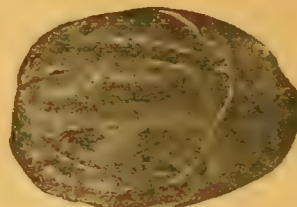
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heavy that 200 pounds of nuts were expected, but these trees surprised us again, for when we had all our crop picked and dried out we had not two but eight hundred pounds of nuts. They were beauties, too, and as much different from seedling pecans as a thoroughbred is different from a scrub. The yield of the individual trees ran all the way from a few nuts to 35 pounds to the tree. The average of the orchard was 2 2-3 pounds per tree, or about \$1 per tree. Some of the best varieties made as high as five to ten dollars per tree. The revenue from the highest yielding tree was fourteen dollars. Do you wonder why people are planting pecan trees?"

And thus speaks one of the highest authorities in the United States. And what has been done in North Carolina can be done in South Georgia with the same expert, care and attention, because from both a soil and climatic standpoint South Georgia excels the world in the production of this king of nuts. Think it over.

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farm lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Bldg., Atlanta, Ga.—Adv.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson: a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XV

July 1916

Number 7



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OF
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1907	750
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1909	1,500
1910	3,300
1911	1,450
1912	3,000
1913	1,100
1914	2,250
1915 (estimated)	3,800

PECAN EXCHANGE MEETING.

An adjourned meeting of the stockholders of the National Pecan Growers Exchange was held at Thomasville, Ga., on the occasion of the Georgia-Florida meeting. Reports of operations were made and directors for the ensuing year were elected. The new board is, with one exception, the same as formerly. Available funds were appropriated for immediate use in carrying out the purposes of the organization.

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THE NUT-GROWER

VOLUME XV


WAYCROSS, GA., JULY 1916

NUMBER 7

MY EXPERIENCE IN TOP-WORKING HICKORIES TO PECANS

By JUDGE FRANK B. GUINN, Rusk, Tex.

Read at the meeting of the Texas State Horticultural Society

 IN 1909, through Dean Kyle, of our A. & M. College, I secured the services of Mr. G. H. Blackmon, then a student at the college to come to my place and bud some pecans and hickories. I had previously prepared the hickories, which ranged in sizes all the way from sprouts to bearing trees, 15 to 18 inches in diameter. The work was done in June and July, and a very large per cent of the buds took and grew. Some of the larger trees budded produced a few pecans in 1911, including two or three budded on sprouts from one to two inches at the ground, which had sprung up from near stumps, and had a large root system. The crop has increased each year, on the average, and some of them are now bearing profitable crops. In 1910, I had a number of hickories budded to pecans, and some each year since that time, and I now have several hundred pecan top-worked hickories growing and something like 100 of them are in bearing. Last year I gathered from some Delmas top-worked hickories as much as ten pounds or more of good nuts from trees budded in July, 1910. The nuts were of fine flavor, well filled out and of good size and weight, running from 45 to 50 to the pound.

Many of my early budded trees were budded largely to west Texas pecans, such as the San Saba, Halbert, Hollis etc., and none of them do well in my section of the country and are especially unsuitable for hickory work in east Texas.

I also made the mistake of using a number of pecans of more eastern origin which are not valuable, or are unsuited for working on hickories, such as we have in east Texas.

I would not recommend even the Stuart, the most widely planted of all commercial pecans, for hickory work. Anyway, they have not done well for me, and the nuts produced were considerably smaller than those grown on pecans.

I came to the conclusion several years ago that the pecans grown on hickory roots were somewhat

smaller than those grown on pecan roots. I have more recently been convinced that the variation in size was influenced more by situation, cultivation and soil fertility than anything else. I think, too, that the variety of pecans has much to do with the question, as it has with other features of pecan growing. I do not believe, therefore, that it necessarily follows that a variety of pecans which may succeed well in a given locality on pecan will do so on hickory. We must make trials and experiments along this line and there is much to learn about it yet.

A certain variety of pecans may have a closer affinity for certain kinds or varieties of hickories, and when these are all established and ascertained I believe that the growing of pecans on hickories can and will be made quite successful over a large portion of this state and over much of the South.

I have talked to a number of persons who have top-worked hickories in a small way in east Texas, who expressed more or less doubt as to the success of it, and in each instance they had used varieties which have failed for me, or the situation was unfavorable. And yet I can show as pretty pecans on hickories, with as good and perfect unions, as can be shown by anyone on pecan roots, and I will show as good crops of nut for size and age of trees, against pecans on pecans, where conditions are equal.

Of course, top-worked hickories out in the brush and in neglected situations are failures without regard to what variety of pecans were used to top-work them, and such trees would be failures as hickory nut trees if they had been left alone.

We must not forget that simply top-working a tree does not change its conditions, and that top-working one to a pecan will not enable it to produce pecans in a situation and condition in which it would not have produced hickory nuts. Many men appear to overlook this fact, as patent as it should

be to every one. One traveling through the woods of east Texas will soon observe that the crowded hickory trees bear few nuts, and they, as a rule, faulty. But he will notice that trees out in the open, with plenty of room and fair soil, produce good crops of nuts of good quality. The same is true of the pecan. Not only this, but we all know that the trees in the cultivated lands, or along the fence rows, where they can send out their roots into the cultivated soil, are the best and most regular bearers of all. This being true the way to success is pointed by nature.

Pecans respond as freely to good treatment and to fertilization as any other crop, and with these and plenty of moisture which can ordinarily be had by cultivation in east Texas, we will succeed with the proper varieties of pecans, whether on pecan or hickory roots.

As I am called on to give my experience in top-working hickories to pecans, I do not deem it necessary to discuss the methods or manner of such top-working, as there is no difference in the methods of top-working seedling pecans to the commercial varieties and hickories. The different methods have been discussed very generally of late by men who are better informed as to such work than I am. I have found the ring budding method quite successful, and also the chip and patch bud, and the recent introduction of the bark grafting worked out by Dr. A. Caswell Ellis, of the Texas University Extension Department, with the assistance of Messrs. Edwards of Dallas, and Burkett of our State Department of Agriculture, has been a decided success with me, and this method has greatly increased the opportunities to do such work, making it possible, in connection with other methods, to do something along this line throughout most of the year.

Mr. Burkett is making a special study of all the methods in use, and of their application to all kinds of stocks and varieties, and his work will, in my opinion, result in much good to the industry and to the prosperity and welfare of the state. All this work is of comparatively recent date, and we are making progress, day by day, and the people of the state are greatly indebted to the pioneers in this great work, and much of the credit belongs and is due to a number of the members of the Texas State Horticultural Society, so well known that it is unnecessary for me to name them, a thing I would not like to do, lest in calling over their names, I might not be able to name them in the order of merit to which each is entitled. And so we will class them all as benefactors to Texas and to the human race, for such they are.

I am not prepared to give a list of varieties of the commercial sorts of pecans one should use in

top-working hickories, even in my own territory, as I have not tested all the well known varieties even, much less many of lesser note, some of which may be very successful when tried out. I have had good results from Delmas, Schley, Moneymaker, Van Deman, Pabst and some others, but some of these are better than others, taking into consideration their bearing qualities, flavor, size, etc. My favorite at present is the Delmas, and, while Delmas has been found very subject to scab in some sections, and in the vicinity where it originated, it has shown no symptoms as yet with us, and it is both prolific and of fine quality, ranking next after the Schley in that respect.

The Schley probably possesses the highest qualities as an eating pecan, and probably sells for the best price of any variety, and while it grows readily on our hickories and bears fair crops, its general defects follow it on hickory as well as on pecans, to wit: Its variableness in size, even on the same tree and the fact that, though a rather regular bearer, it is not a prolific one, as a rule.

I do not find that the top-working of a pecan on hickory stock affects the thickness of the shell or the flavor of the nut. The sole gain in top-working to hickories lies in the time saving to produce nuts. A small sprout or tree having a root system established and growing, when top-worked and given proper treatment, will begin bearing several years sooner than a transplanted tree, and I would say that some five years or more can thus be gained by top-working the trees found where they can be left to grow, over transplanted pecan trees.

I find that more nuts will be obtained in a few years when the larger trees are topworked, but that more of the large top-worked trees are lost from bad unions and from breaking off after growing new tops and that it is much more expensive and difficult to top-work the large trees. Where one has both kinds together it would not be bad to work both, and use the larger top-worked tree for nuts until the smaller one needs the room, and then cut out the larger one, leaving the smaller and better shaped one for the permanent tree. It would not be a bad idea in top-working a hickory grove to plant pecan seeds in the grove and top-work them for use after using the top-worked hickories until the younger trees need the room. You cannot have too many nut trees, especially pecans, anywhere they will grow. They are beautiful to look upon, and besides furnish us with a most delicious and nourishing food.

In the next issue of *The Nut-Grower* the proposed change of name of the National Nut Growers Association will be discussed. This important question will come up at the Jacksonville meeting.

NURSERY AND ORCHARD CULTURE IN EUROPE

By L. MAJEWSKI

Read at the 1916 Convention of the Georgia-Florida Pecan Growers Association

The all know that Europe is not benefitted with pecan industries, and I can't tell exactly about the culture of nurseries and of orchards planted in pecan trees.

The European countries are propagating different kinds of nut trees. First place belongs to the Italian walnut, known here as the English walnut; next are Turkish nut trees of which the nuts are with solid round kernels, size about one-half inch, thickness of shell about the same, as our seedling pecans. Third place belongs to chestnuts, well known in this country. These are only propagated in the southern countries of Europe. In central and eastern countries are grown a great many wood nut trees, or rather, bushes, never very tall, reaching not more than 15 feet in height on good land.

The nuts are about one-half inch in size, have a round kernel closed in by a smooth shell. They are useful for food as raw nuts, also for candies, cakes, etc. These trees mostly plant themselves, or are scattered by birds or grow wild in the woods; they are often planted also in parks, as ornamental shrubs, being cut to desirable shapes.

Italian walnut, chestnut and Turkish nut trees are grown by general nurserymen, who propagate all kinds of fruit trees adapted for their own country and for adjoining countries.

Nurserymen prepare the field selected for nursery growth very carefully. In the early fall the land is supplied with stable manure thick enough to cover the land, or about 25 two-horse wagon loads to the acre. This manure is mixed with the soil by spading in to the depth of two spades and afterwards the field is cultivated with tooth harrows and the cultivation is carried on as long as the weather permits. After the snow covers the ground the soil is protected from severe frosts and warmed up by manure from the bottom, and the process of dissolving of manure and its joining with the soil never stops, so the prepared land is ready to give a good start to growth when planted in the spring.

In countries with more severe climate, the trees are hilled up with the earth and the hills covered with manure in order to protect the trees from winter killing.

Some nursery trees, like apples, pears and cherries can stand cold weather without injury and in the spring they only need pruning; but prunes, plums, nut trees and peaches mostly have to be cut back when the first frost comes and trees become dormant, and then they are hilled up and manured on top of the hills.

During the spring season, the majority of nurserymen use as commercial fertilizer ground bone meal and potash in form of kainit, as cheapest. The ammonia is supplied only by stable manure, but if a long dry season in summer comes and nursery stock don't show deep green color, nitrate of soda is applied to prevent the stoppage of growth.

As a general rule, nurserymen do not force the trees in nursery by using an excessive amount of ammonia to avoid the trees making poor growth after transplanting from nursery to common field soil.

In western and southern Europe nursery stock makes about the same growth as in our southern states, but in the eastern part of Europe often the trees lose their first foliage during cold spells in the middle of May. The cause of this is that large rivers and lakes of northern countries start to move with flakes of ice and at the same time northern winds predominate over all of eastern Europe and brings very cold weather, cold enough to spoil the garden vegetables and often the foliage of nursery stock. The local people always look for a cold spell on the 12th, 13th and 14th of May and the patrons of those days, St. Pancrace St. Servace and St. Boniface, are jocosely named the friends of gardeners. If these friends of gardeners ruin the foliage the trees sprouts a second time, but the growth of nursery stock is thrown considerably back.

PLANTING OF ORCHARDS

In the opinion of progressive orchardists, the good start and success of planted orchards lies in proper selecting and preparing of land on which orchards are to be planted, and to this matter is given very careful attention.

The people of Europe are believers in stable manure and they try to use it every time they have opportunity to get its beneficial activity. After selection of the field for orchard, the land is covered with stable manure and right away plowed shallow, about four inches deep. This is done during August. This land is exposed to fall rains, the manure getting rotten and thoroughly assimilated with the soil. First part of November, the land is plowed again, a little deeper, 5 or 6 inches, and then the holes are dynamited and dug and the earth taken out is scattered around the field. The holes are kept open through the wintertime and get the benefit of frosts as factors for pulverizing the soil, and as the snow gradually melts it supplies the soil with moisture.

(Continued on page 102)

The Nut-Grower

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



Our Texas friend, E. E. Risien, of San Saba fame, while a loyal citizen of this country, is not unmindful of the trials and tribulations of Deal, England, the place of his birth, and keeps in touch with things there by means of the local paper. Last December he sent a barrel of pecans to the editor to help out the Christmas cheer of the children of the town. The steamer carrying the nuts was torpedoed on reaching the war zone, but eventually reached port, and the barrel of choice Texas pecans fulfilled its mission effectively.

The selection of Jacksonville, Fla., for the 1916 convention of the National Nut Growers Association promises to be peculiarly fitting, as it is the business center for the extreme southeastern section of the country and a locality where the pecan reaches a development not surpassed by any other equal area in the pecan belt. It is true that the industry has not yet reached the prominence it has attained in southwest Georgia and west Florida, but the future has some wonderful developments in prospect for this locality.

A favorite way of speaking of nut trees is to call them "engines of production." While this sounds nice and attracts attention to the trees, still we think it fails to do justice to trees like some we know, where there is not only the motive power which the engine suggests, but a complete factory turning out a highly finished product, where the alchemy of nature's laboratory combines and compounds in due proportion the elements which are concentrated in usable form for human food, and then canned so scientifically that its use can be extended from one crop period to another.

Nursery and Orchard Culture in Europe (Continued from page 101)

In early spring the orchardist runs over the field with a disc harrow to pulverize the surface of the land, and when planting the trees he scrapes the top-soil, about 3 inches deep, and packs it around the roots of the trees, being careful not to push the roots down but give enough earth under them to secure the position they had before in the nursery.

Stable manure mixed with top soil and exposed to the influence of the weather gives benefits to crops during 3 to 4 years' time, but after being mixed with soil for six months and buried deep in the hole and in this way protected from the action of air, the same manure retains the feeding ability for six years or more. It supplies the trees with food during the most important period of growth and brings the trees almost to the age when they can take care of themselves.

Of course, during this period the additional ration of manure or commercial fertilizer will do very much good, but the fruit trees can be left without this fertilizer for several years with only slight suffering in growth.

In 1896 I planted by this method in Poland some Hungarian prunes, cherries, apples and pears and in 1900, or after four years, these trees were twice as large as trees planted one year sooner by the man from whom I bought the farm.

Preparing land for orchard by the above method is a little troublesome, because at least half a year in advance you have to start the work, but for this trouble you will be amply repaid.

On my farm near Monticello, in May 1910, I manured about an acre of land, planted peas, gathered the seed and plowed under the vines. Next January I dug the holes, scattering the earth around, and in February I planted 16 trees—Schley, Delmas and Success. In 1914 these trees bore a peck of nuts and in 1915, or last season, I gathered two bushels and two quarts, or over half a peck to each tree. These trees are between 20 and 25 feet high, with a thickness of trunk 4 1-2 to 6 inches in diameter four feet above the ground; one of them has a diameter of 8 inches at the ground.

Seeing the result of planting by this method, I am planting on my farm every year several acres in pecans, manuring the land heavily for summer and in winter use the top soil for filling up the holes around the trees when planting them.

When planting trees I am dynamiting the holes, and then I dig them 3 to 4 feet deep and 4 to 5 feet wide, so as to have plenty of room for fertilized earth.

The tops of a majority of trees planted in January, 1914, are 4 to 5 feet in diameter now and I hope they will reach this season a couple of feet more.

Q
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PECAN TREES

NURSERYMEN—AND—PLANTERS

Be your wants large or small, we can fill them from our fine blocks of trees.

It will be greatly to your advantage to write us for terms and prices.

Our stock will please the most exacting.

FLORIDA NURSERIES

W. W. BASSETT, Prop.

MONTICELLO, FLA.

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NUT TREES, PECANS WALNUTS

Also 1000 acres in nursery. We grow a general line of nursery stock, suitable for the South. Plant more trees and less cotton. Write for illustrated catalog.

Southern Nursery Co.
WINCHESTER, TENN.

Atlantic Coast Line

"The Standard Railroad of the South"

SEE A. C. L. TICKET AGENTS
REGARDING SUMMER
TOURIST FARES, SCHEDULES,
ETC., TO VARIOUS SUMMER
RESORTS

Passenger Service Unexcelled

GETTING READY FOR THE CONVENTION.

Mr. William P. Bullard, secretary of the National Nut Growers Association issues the following circular:

The 15th Annual Meeting of this Association will be held in Jacksonville, Florida, November 22 to 24.

The last convention was the greatest in the history of the Association.

We want to make the Jacksonville meeting a greater success.

We will have a fine program and we want you to help us to make this a record by your attendance and active participation in the proceedings.

We want your name in the Badge Book which will be issued shortly. To accomplish this you will please mail your annual dues, (\$2.00) to the secretary at once and this entitles you to a free copy of the convention proceedings when issued.

We need your co-operation. It is the duty of every nut grower to co-operate with this Association, which is National in scope and influence as well as in name.

The nut industry has aroused tremendous interest all over the country; this interest is increasing. It is recognized and demonstrated to be one of the most profitable of investments.

The great pecan industry is coming into its own with splendid orchards fruiting lavishly.

You must become and remain an

PECANS

Budded Trees of The Best Varieties
Let me send you price list. Also

Peach trees, good assortment, 6c.

HARTWELL NURSERIES

S. W. Peek, Prop. - Hartwell, Ga.

The Original Pecan Nursery in Georgia

We are Going Out of Business at Cottage Hill

AND THAT MEANS WE WILL
MARK OUR STOCK DOWN TO
BARGAIN FIGURES IN ORDER
TO CLOSE IT OUT EARLY

No matter where you are or how many trees you want, write us soon and you will save some money.

We have a fine line of pecans in Frotscher, Stuart, Schley and Money-maker. A fine line of Brewton (blight proof) Pears, Jap Persimmons, etc.

Orders booked now and shipment made when desired.

YOU CAN'T BUY FINER STOCK, SO GET BUSY WITH YOUR PENCIL TODAY.

ADDRESS

**THE PENSACOLA SEED
& NURSERY CO.**

Cottage Hill, Florida

integral factor in this great development.

Attend our convention and be up-to-date.

THE PECAN-TREE BORER.

(*Sesie scitula* Harris)

This species resembles the common peach-tree borer; it differs, however, in its manner of living. It appears to be more or less destructive throughout the Gulf region, from South Carolina to Mississippi, and has been observed, on other food plants, throughout the Eastern States and Canada. In its injuries to pecan it seldom if ever attacks trees less than two inches in diameter, and it is more abundant on such as are three or four inches thick, or still larger. It also confines its operations to the trunk and branches above the ground, and seldom, if ever, penetrates deeper than the sapwood. This it channels out and destroys, and when many individuals are present, especially in comparatively small trees, their combined operation has the effect of girdling, producing the death of the tree. This borer usually enters the trees where they have been injured or where they are budded, the female being attracted to such places to lay her eggs.

Considerable has been learned in regard to the economy of the species from reports of different observers. The moths begin to issue in April.

With the knowledge that the moths begin to appear at this time and a little later, and the eggs are deposited in, or near, decorticated portions of the trunk and limbs, it would seem not difficult to protect ourselves against the ravages of this borer by covering denuded portions of bark, just before the moths begin their flight, with grafting-wax, and using a sufficient quantity of the same material about the buds. The addition of some sticky substance like printers ink, or fresh pitch, or of soft soap should be tried as a further repellent and means of capturing the moths. The standard remedy for the peach-tree borer—digging out with a knife or gouge—should be employed whenever and wherever the borers are found at work. It is quite possible that a thick whitewash applied to the trunks and lower limbs of the trees in March would be effective as a repellent. Special care should be taken when plowing or cultivating between trees not to abrade the bark, and horses should not be permitted to

Jefferson County Pecan and Live Stock Company

Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.

L. Majewski, Gen. Mgr.

Nut Tree Sale



Owing to the fact that we are changing our nut nursery business from Boonville, Indiana to Bowie, Maryland, we are prepared to offer the wholesale trade for fall delivery several thousand fine, hardy, budded and grafted northern Pecan trees on three and four year old stocks. These trees are the standard northern varieties and are as fine as any ever produced. We will quote wholesale prices on request on lots of fifty or more.

Littlepage & White

Room 607 Union Trust Bldg.

Washington, D. C.

STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right.
Chas. Crossland, Bennettsville, S. C.

FLORIDA Pecan Orange and Grape Fruit Grove FOR SALE

106 acres of excellent land planted to 1500 paper shell grafted pecan trees of the best variety; 1400 orange and grapefruit trees; house, barn; live stock included.
Write to

DAVID S. WOODROW
OCALA, FLA.

PECAN ORCHARD and Farm for Sale....

Pecan orchard of 140 acres, containing approximately 2250 trees—15 to 20 years old—embraced in 850 acres of fine farm land, situated three miles from Atlantic Coast Line Railroad Company, in Edgecombe County, North Carolina. The land is in the heart of the corn, tobacco, cotton and peanut belt of Eastern North Carolina.

E. M. LAND,

Goldsboro, N. C.

A. S. KOTTWITZ CO., Ltd.

Poydras and Tchoupitoulas Sts. New Orleans, La.

Pecans! Pecans!

Largest receivers of Pecans on this market. Get in touch with us, we are sure to satisfy you and that you will become a steady shipper. Write or wire us any time you have pecans. Send samples and quote lowest price.

REFERENCES: Bank of Orleans, Metropolitan Bank, all Railroads and Express Companies

SAFETY FIRST

Should be applied in purchasing nursery stock and we warn prospective planters to

BEWARE

of the small, back-yard concern that, on account of prevailing conditions, is offering inferior stock at low prices. In the end this is a poor investment.

A QUARTER OF A CENTURY

we have been in the nursery business and hope to remain in it another like period, therefore we safeguard our reputation by supplying our customers only with dependable stock.

OUR PRICES ARE REASONABLE

on high-grade PECANS, CITRUS, PEACHES, PLUMS, FIGS, GRAPES, ROSES, ORNAMENTALS, etc. Write for prices to

SUMMIT NURSERIES

DEPARTMENT 50

MONTICELLO, FLA.

HOTEL SEMINOLE

JACKSONVILLE, FLA.

EUROPEAN PLAN

Rates without Bath, \$1.00 per day and up.

With Private Bath, \$2.00 per day and up.

WRITE FOR RESERVATIONS

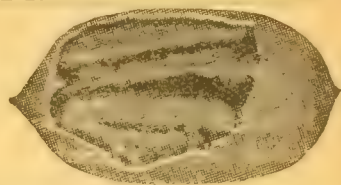
CHAS. G. DAY, Manager**Budded and Grafted
PECAN TREES**

HEALTHY, WELL-GROWN NURSERY STOCK. STANDARD VARIETIES FOR SALE. REASONABLE PRICES. WRITE FOR PRICE LIST

Poland Plantation Nurseries
Monticello, Fla.

rub against the trees. Large wounds should be protected with wax, and bound over tightly with rags.—F. H. Chitenden.

A permit has been issued to the California Almond Growers Exchange for the building of a shelling plant and warehouse at 1815 C street, Sacramento. The cost of the building, which is an extension of the present plant, will be \$8,300, and will be of Dennison tile factory style construction. Work on the extension has already been started and will be rushed to completion as rapidly as possible.

**The Pecan Business**

In a concise booklet—FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.

B. W. STONE :: Thomasville, Ga.

**ROOD PECAN
GROVES**

Albany, Ga.

**Pecan Trees, Pecan
Nuts, English Wal-
nut Trees**

Write for Prices

C. M. Rood, President**BUDED AND GRAFT-
ED ENGLISH WALNUT**

and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over
your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES

THE NUT SPECIALIST
Lancaster, Pa.

THE SENSITIVE BRAZIL NUT

From the Popular Science Monthly: A pod with a diameter of from five to six inches, in a thick, hard woody outer covering, contains the so-called Brazil nut of commerce, from twenty to twenty-four of these seeds being closely packed in one shell. On board the vessels the greatest care is taken of the nuts. They are turned over daily and kept supplied with a constant current of fresh air. Twenty-four hours of stormy weather in which the ventilators have to be kept closed is sufficient to ruin an entire cargo. Every precaution is taken to keep the atmosphere "comfortable," for the sensitive nut feels the slightest change of temperature.

As they begin to ripen, the pods fall and are gathered by the natives, who cutting the outer shell with a machete, collect the nuts and carry them in baskets to the rivers on which they are transported by canoe, launch, or river steamers, to the nearest port of call for ocean steamers on the Amazon river.

Grafted Pecan Trees

of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

Ocean Springs :: Mississippi

WHOLESALE
GROWERS OF

**GRAFTED AND
BUDDED
PECAN TREES**

**SIMPSON
Nursery Co.**

Monticello, Fla.



The May Nut Cracker

The only dependable and successful cracker manufactured. Easy to operate, rapid and lasting. Postpaid anywhere in U. S. on receipt of \$1. Address F. B. MAY, Patentee, Wharton, Tex.

TRADE MARK REGISTERED

PHOSLIME

FOR
STAPLE CROPS

All the elements contained in Phoslime are good for Plant Food. Ground to a fineness, spread on land from 1000 to 2000 lbs. per acre, plant in Legume Crops such as China Beans, Velvet Beans or Cow Peas turned under will bring the Nitrogen functions to their own, make the soil productive for Corn, Wheat, Timothy, Clover, Oats, Alfalfa, Cotton, Sugar Cane and Rye. Nothing can equal this method of sweetening and bringing the latent Potash to preform the work Nature requires of it.

IMMEDIATE DELIVERY

Prices F. O. B. Phoslime, Fla., In Bags

Carload \$9.00 Per Ton	Less Than Carload \$10.00 Per Ton
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WRITE FOR BOOKLET

FLORIDA SOFT PHOSPHATE & LIME CO.

Box 462 :: Ocala, Florida

The Williams Pecan

A Recent Discovery

COMBINES MANY DESIRABLE QUALITIES. IT HAS SIZE, THIN SHELL, AND A PLUMP KERNEL, IS A SPLENDID CRACKER AND HAS AN EXCELLENT FLAVOR.

The tree is a vigorous grower, a regular and abundant bearer and is resistant to disease and insects.

Write for free leaflet giving the story of pedigree and record of bearing as written by the editor of The Nut-Grower.

DR. W. P. WILLIAMS
BLACKSHEAR, GA.

Sweet Clover—the Southern winter-growing variety. The new hay and pasture legume. The greatest of all cover and fertilizing crops. Sow in summer. Booklet. Sample. HASKELL & HASKELL, Garden City, Kans. 5-3

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A Magazine of Trade News
and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$1 per Year

**HORTICULTURE
PUBLISHING COMPANY**

147 Summer Street
Boston, Massachusetts

PECAN TREES

Our Specialty is growing wellrooted budded and grafted trees of best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

We are Cash Buyers of Pecans



Whenever you have any to offer get in touch
with us. No quantity too large. Will buy
to advantage Seedlings.

R. E. Funsten Dried Fruit & Nut Company
ST. LOUIS, MO.

Some months ago, Mr. James Brodie, of Biloxie, Miss., gave southern nurserymen some pecan talk, and among other things he said: "In the improved pecan we have one of the grandest gifts of unassisted developing nature. If we have anyone to thank for this wonderful advance, it lies with the selective instincts of a forgotten ancestry, who brought the first pecan nuts to their retreats on the coast; or the selective and acquisitive instinct of the gray squirrel, who tasted, planted and left behind his dearest and nearest, the heart treasures, when called on to honor the stewpot of the southern Mississippi planter."

For some time past we have been assembling information as to the cost of gathering, curing and marketing pecans. It is no easy matter to tabulate and classify the information on file, as circumstances vary in different orchards and no two cases are alike, except where orchards are under a central management. One non-resident investor in the Albany district employed a local man to gather, cure and market his 1915 crop at an expense of six cents a pound. His eight year old trees averaged four pounds apiece, while trees a year younger fell somewhat below one pound per tree. The nuts were sold for 35 cents per pound. Other reports are less favorable as to cost of gathering, as well as in the selling price.

SCALE OF POINTS FOR JUDGING PECANS

The following scale of points, which was adopt-

ed at the New Orleans convention in 1903 has since then been continuously in use. Several interesting things are noticeable in the number of points assigned to the eight different characteristics of the pecan. Three of the eight apply to external character three to the kernel and two to the shell.

Size of nut.....	20 points.
Form of nut.....	5 points.
Color of nut.....	5 points.
Thinness of shell.....	10 points.
Cracking quality	20 points.
Plumpness of kernel.....	20 points.
Color of kernel.....	5 points.
Quality of kernel	5 points.

100 points.

A separate scale applies to the tree, and the average of the two ratings is used in determining the value of a variety. Thus far the grading of trees has received much less attention than has been given to the characteristics of the nut while, in the light of experiences since the scale was adopted, the tree characteristics are the most important.

Vigor	10 points.
Habit	10 points.
Toughness	10 points.
Resistance to disease and insects	10 points
Precocity	10 points.
Uniformity of ripening.....	10 points.
Productiveness	40 points.

100 points.

U. S. IMPORTS OF ALMONDS.

Fiscal Year	Pounds
1900-01	5,140,232
1901-02	9,868,982
1902-03	8,142,164
1903-04	9,838,852
1904-05	11,745,081
1905-06	15,009,326
1906-07	14,233,613
1907-08	17,144,968
1908-09	11,029,421
1909-10	18,556,356
1910-11	15,522,712
1911-12	17,231,458
1912-13—	

Not shelled 2,592,187

Shelled --- 13,078,771

15,670,958

1913-14—

Not shelled 5,730,774

Shelled --- 13,307,631

19,038,405

1914-15—

Not shelled 4,902,713

Shelled --- 12,208,551

17,111,264

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

Catalogue for the asking

P. J. Berckmans Co.,
FRUITLAND NURSERIES
Augusta, Ga.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

Send 25c and the names of three fruit growers and you will get a trial 12 months subscription to the AMERICAN FRUIT-GROWER at one half the regular price of 50c.

A monthly publication devoted to fruit growing, edited by practical orchardist and published in the heart of the Appalachian fruit belt.

Try this Practical, Helpful Paper at this Special Rate

Address Dept. 2

AMERICAN FRUIT-GROWER
CHARLOTTESVILLE, VA.

G. H. Tomlinson
NURSEYMAN
Putney, Ga.

Everything Suited to the South

THE NUT-GROWER

ALL ABOUT KUDZU



A 3-Ton Cutting of Kudzu at Glen Arden Farm, Showing both the Cut and Standing Hay

Most wonderful growth. The coming forage crop of the South. Better than alfalfa, red clover or timothy. Better because it succeeds on land too poor for those crops. Better because it does not have to be cut at a certain time to save it. Better, because a shower of rain doesn't ruin the hay. Better, because stock like it better and it contains more protein than wheat bran—from 16.59 per cent to 19.80 per cent. Kudzu is perfectly safe for all stock. Now is the time to place your orders to be sure of plants. Kudzu has great possibilities as a cover crop for pecan orchards, to supply nitrogen for the young, growing trees. For further information and prices write,

G. E. Pleas Plant Co. "GLEN ARDEN FARM"
CHIPLEY, FLORIDA

The Fruit-Grower

The National Fruit Magazine

10 Trial Issues 10c

THE ONLY TWICE-A-MONTH FARM PAPER
DEVOTED EXCLUSIVELY TO THE INTERESTS OF FARMERS WHO GROW FRUIT

Authentic crop and market reports in the interest of the GROWER. Our winter editions have comprised from 50 to 100 pages brimful of interesting articles on all phases of fruit-growing, gardening, poultry, the farm home, etc. Handsomely illustrated.

Accept this GREAT TRIAL OFFER at once, and we will tell you how you may secure our 300-page illustrated book on fruit-growing, free of charge. Send only 10c, coin or stamps, at our risk. Address

THE FRUIT-GROWER

Box 73

St. Joseph, Mo.

15,000 Pounds Pecans

We expect to have for sale 15,000 pounds of the highest grade, standard size and weight pecans, as follows:

Schley	8,000 lbs.
Stuart	3,000 lbs.
Van Deman	2,500 lbs.
Frotscher	2,000 lbs.

WE WILL SELL IN BULK THE WHOLE CROP, OR OTHERWISE

Deliveries October 15th and January 15th.

KEYSTONE Pecan Orchard Co.

Groves: Baconton, Ga.
Offices: Florence, S. C.
JAS. D. EVANS, President

The W. B. Dukes Pecan Farm

Moultrie, Georgia

Growers and Shippers of

FANCY PAPER SHELL PECANS

One million grafts and buds of Schley Stuart, Delmas and Moneymaker. Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones
Cairo, Ga.

BUTTON CLOVER.

Button clover is a new pasture plant which specialists in the U. S. Department of Agriculture are now advocating for use in the milder districts of the Southwest and along the Gulf, the South Atlantic, and the Pacific coasts. This plant will succeed, it is said, wherever our clover does well and it is to be preferred to the latter in certain respects. Under favorable conditions it produces much more seed and it has spines on the pod or bur. It grows well in the pecan belt.

FOR SALE

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

For Sale—A thousand pounds of medium sized, fine quality, thin shelled Louisiana pecans. Offered in bulk or small lots to suit purchasers. Attractive price. W. M. ELLISON, Lafayette, La. t

A Pecan and Satsuma Orchard and Nursery at a bargain. If you have \$4,000.00 write to AUG. EDWARDS, Lucedale, Miss 5-3

For Sale—Budded Pecan Trees and Budwood, standard varieties. 45 acres pecan orchard, 2 and 3 years old; also improved farms. C. W. RANSOM, Houston, Tex. 7-8

WANTED

Price Delivered to L. J. Sharpe, at Commerce, Ga., 500 each of budded and seedling pecan trees, 2 to 3 inches in diameter at the ground. Give height of rough bark.

5,000 Stuart Pecan Trees

6 to 9 Feet Tall

Get Our Special Prices

We have other varieties and a stock of 15,000 Satsuma orange trees for sale. Write Us.

The Paper Shell Pecan Nursery, Ltd.

W. M. Ellison, Mgr. LAFAYETTE, LA.



For Greatest Satisfaction Use
DOUBLE SERVICE
Automobile Tires
Guaranteed 7,000 Miles Service

Absolutely Punctureproof

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service.

Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

PRICES

Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60 \$2.30	36x4 in.	\$17.45 \$4.65
30x3 1/2 in.	10.85 3.10	36x4 1/2 in.	21.20 5.60
32x3 1/2 in.	12.75 3.20	38x4 1/2 in.	22.60 6.75
33x4 in.	15.75 4.20	37x4 1/2 in.	23.60 6.20
34x4 in.	16.70 4.35	37x5 in.	26.30 6.60

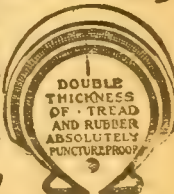
All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only.

Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



A BARGAIN FOR SOME NURSERYMAN

37,000 PECAN TREES IN NURSERY ROWS, APPROXIMATELY HALF BUDDED TO BEST VARIETIES. FOR PARTICULARS ADDRESS

I. W. SEAMAN, Waycross, Ga.

A half interest in a going nursery with bright prospects. Over 100,000 nursery trees coming into market. Owner must have help to move it and a bargain awaits a good, wide-awake hustler. Plenty of expert help, so all the buyer needs is a little cash and managerial ability. Address Opportunity, care The Nut-Grower, Waycross, Ga.

When writing to advertisers please mention The Nut-Grower.

PECAN SOILS OF THE GEORGIA-FLORIDA SECTION

(Continued from June number.)

Two fields of the same type may vary greatly. Soils can be depleted of their plant food through injudicious cropping or leaching, be injured by plowing too wet; or in need of drainage. A Tifton sandy loam on Mr. Smith's farm may grow fine trees, yet the same type on Mr. Doe's farm may produce poor, little, weak, pitiable things. The fault is not with the type nor with the soil's natural strength but with the condition into which it has gotten naturally or by the sins of omission and commission of man. It can be by the use of corrective methods and proper system of soil building, which will be discussed briefly a little later, be brought back to its original productiveness. On the other hand a Norfolk sand, which we have classed as a non-pecan soil, is unsuited and will not respond to reasonable treatment.

Consequently a working knowledge of soils is of value. This knowledge can not only tell us the difference between pecan soils and those which are not, but it will also tell us how to treat those which are.

In passing I want to say something about watertables and their relation to pecan production. We think of water table as the height to which water will rise if a hole is sunk in the soil. In reality it is a little higher than this line. We have all heard time and again that the tap root of the pecan must strike the water table or it will not bear. We have also been told that if the pecan has wet feet it will not do well.

It suits my purpose in trying to be brief to refrain from arguing, but instead I shall cite you two cases illustrative of these two points. Mr. Smithwick has an orchard near Americus. The water table under this soil is about 90 feet deep and the trees bore young and well. I have been told by a pecan man that when he stood in one of the successful orchards near the Gulf of Mexico in Mississippi the Gulf looked higher than the orchard. I have examined trees which were healthy and bearing with the water table within seven feet.

If the soil is retentive of moisture it does not matter how deep the water table. If the first five or six feet are well drained the water table can be that close to the surface without

THE NUT-GROWER

Established by G. M. Bacon 1889

Incorporated 1903

Most desirable Standard Varieties only

Budded and Grafted

PECAN TREES

Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

Send for new catalog and price list

The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

15,000 PECAN TREES

In desirable grades and standard varieties.
Healthy, well-grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. LOTT COMPANY
Waycross, Ga.

TO THE NUT GROWERS OF NORTH AMERICA

The Aragon Hotel

EXTENDS TO YOU A HEARTY WELCOME WHEN VISITING OUR CITY ON NOVEMBER 22, 23, 24. WE WOULD BE GLAD TO HAVE YOU STOP WITH US; OR AT LEAST MAKE THE ARAGON YOUR HEAD-QUARTERS.

YOU WILL FEEL AT HOME IN THE ARAGON.

ARAGON HOTEL

A. A. LANGHORNE Manager
H. W. JOHNSON, Asst. Mgr.

Ocean Springs Pecan Nursery

Season 1916-17

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

PECAN TREES

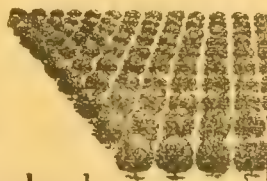
As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.



Fine
Pecan
Trees



And Fine Orchards

Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

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SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

harm. The water table of course can be lowered in most soils by drainage. And as to the tap root, it is a much overrated part of the tree. Its main function is to act as an anchor.

Fortunately for the pecan grower and farmer generally there is such a thing as varietal variation. A variety which does well in a heavy soil may not do so well in a light one and vice versa, and then there are some which are very cosmopolitan, like the Stuart. We are just beginning to find out about the adaptability of pecan varieties although we have known for a long time about this in reference to other crops.

There are two schools of soil builders, to get back nearer the subject. Those who believe that the grower should feed the plant and not the soil and those who say build up the soil and the plants will take care of themselves. The disciples of the plant feeders are shallow powers, and top dressers with commercial fertilizers, while the others talk about ground limestone, phosphate rock untreated, and green manure crops. The advocates of both schools have strayed somewhat from practical crop production and probably have missed the truth in both extremes. I have summarized the good of both as I see it, as follows:

Use ground limestone rock when legumes are to be grown.

Use ground phosphate rock as a mixture with stable manure or similar material but do not broadcast it on average soils. Turn under legumes whenever possible, but if practicable graze with hogs or feed to other stock as hay, returning the manure. Use acid phosphate or basic slag for supplying the natural deficiency of our soils and in proportion nitrogen when the trees are not making the desired growth. Potash will probably be needed for bearing trees.

In conclusion, it seems well to state, that there is an abundance of soils in the Georgia-Florida section particular county or portion of this section has a monopoly on these for growing the pecan, and that no soils. They can be found to a greater or lesser degree everywhere. Furthermore, although treatment can do a great deal to make soils produce trees, it seems always the best policy to select the best pecan soils obtainable. For you will no doubt agree with me that it is entitled to the best there is.

BULLARD PECAN NURSERIES AND ORCHARD

Leading Varieties, True to Name

AN EXPERT OPINION

May 22, 1916.

Mr. Wm. P. Bullard,
Albany, Ga.

Dear Sir:

Replying to your inquiry as to my opinion of your pecan nursery stock will say that I have planted several thousand of them in different seasons and do not hesitate to say that they were the best pecan trees that I ever had experience with.

I have worked continuously in the pecan business for the past fifteen years in Georgia and Florida and for the past seven years have had charge of the field work of a 950 acres pecan orchard near Albany. I have planted trees from most of the prominent nurseries grown in the states of Georgia, Florida, Mississippi, Louisiana, Texas and Alabama; in fact during my pecan experience I have planted from 50,000 to 60,000 of these trees and therefore think I am well qualified to express a opinion on the merits of a pecan tree.

For several years past I have been familiar with your methods of growing, digging and handling of nursery stock and do not hesitate to state over my signature that I prefer your trees over those of any I ever planted or ever saw planted.

E. H. CHESTER.

Prices and Literature on Request
Wm. P. Bullard, Albany, Ga.

The Nut-Grower

Volume XV

August 1916

Number 8



THE 1916 CONVENTION
OF
THE NATIONAL NUT
GROWERS ASSOCIATION
WILL BE HELD AT
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Pecan Orchard Co.

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JAS. D. EVANS, President

NATIVE NUT PRIZES

The Northern Nut Growers Association offers the following prizes this year:

Butternut—first, \$5; second, \$3; third, \$2; and five of \$1 each.

Black walnut, shagbark and shellbark hickories, northern pecans, hazels, Japanese walnuts and hybrid nuts, for each—first, \$5; second, \$3; third, \$2.

In addition, the following conditional prizes are offered:

For a hazel nut of pure American origin that can compete with the imported filbert, \$50.

For a shagbark hickory better than those now being propagated, \$25.

For a northern pecan better than those now being propagated, \$10.

The Georgia Experiment Station has filberts, Japanese chestnuts and about thirty varieties of pecans growing on the grounds of the station at Experiment, Ga.

The W. B. Dukes
Pecan Farm
Moultrie, Georgia

Growers and
Shippers of

**FANCY PAPER
SHELL PECANS**

One million grafts and buds of Schley Stuart, Delmas and Money maker.
Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

airo, Ga.

THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., AUGUST 1916

NUMBER 8

SHALL THE ASSOCIATION'S NAME BE CHANGED?

AT the last session of the 1915 convention of the National Nut Growers Association, just as the convention was about to adjourn at 10 p. m., and after a considerable number of the members had left the convention hall, a motion was made to change the name of the Association. To the greater number of those present the move came in the nature of a surprise. The new name proposed did not appeal to various members, and a succession of amendments to the motion were offered as well as substitutes. There promised to be a prolonged wrangle, which was happily averted by a motion to table, which motion was supported on the ground that no previous notice as required by the constitution, had been given. It was also urged that should a change seem desirable all the members should have an opportunity to be heard on so important a matter.

As the question will come up again for consideration at the Jacksonville convention, it may be well to briefly review the proposition with a view to a clear understanding of the situation. We hold no brief to speak for any one on the subject, but we simply present, for the consideration of our readers, the following observations

We can say at the outset that we have no objections to offer to a change of name for the association, provided there is any reasonable occasion for it and a better title which might be acceptable to a majority of the members is offered. However, we do not endorse the reasons assigned for the proposed change, neither do we think any of the several suggestions for a new name will be found to be improvements on the old one.

It was alleged in support of the motion to change the name that the association was not a national body; that it was sailing under false colors in being a pecan organization rather than a body such as its name indicates; that it had departed from an avowed purpose and that the name was misleading. This came as a surprise to the few old-timers who have fostered the industry in their successful exploitation of the pecan. They supposed that the fact that its membership is distributed in upwards of thirty states, as far north as Canada and

reaching both the Atlantic and Pacific states, with more members along the Gulf coast on account of the pecan being limited to that restricted belt, name. It is recalled also that conventions have been held in as many as nine different states. Then the purpose of the organization was to disseminate. No one can question the living up of the association to that aim, and while the pecan has figured to a very large extent, it was primarily because there was more to the pecan than to any other native nut, and it was pecan men who took the initiative and piloted a new industry to a commercial success which has attracted investments and is now distributing the product so widely that it merits the title of a national body on account of these more recent achievements.

That the association has been true to its name is also evidenced by the springing up of various local associations with territorial boundaries. All of these received inspiration from this parent body, while some of them are the direct outgrowth of influences and opportunities which came naturally in the wake of the national organization.

Naturally many changes have come with changing conditions. Men have come and gone and the ranks have been filled with others who find inspiration, knowledge and profit in the association. Of those who were present at the organization at Macon fifteen years ago only a remnant is left, while those who came in during the first five years and participated in the actual founding of a new industry are entitled to the national honor which has been accorded them by a generous public.

In common with the circumstances surrounding such bodies, the National Nut Growers Association has had experiences incident to normal conditions and some criticism and at times the loss of a few members from causes traceable to the prominence of personal or commercial interest in the management of its affairs. For a number of years there was a beautiful spirit of co-operation which contributed largely to the early prominence of the association and fostered the cordial and personal regard which the members accorded each other.

Friendships which are cherished and lasting developed with the commercial and horticultural activities the pecan made possible. All this did not, however, prevent the suspicion on the part of a few members that personal interests figured to some indefinite extent in the management of the association's affairs. Others ventured the opinion that the pecan nurserymen were in control, while from the viewpoint of still others the National Pecan Growers Exchange is now a dominant power. Whether these views and opinions are entitled to consideration in looking for reasons to change the name of the association, or not is not material, provided the aims and purposes of the association are being carried out. If the operations have gone off in other directions, or made subservient to the personal interest of individuals, then the remedy would be to get back to a public service program, regardless of the commercial and personal benefits which members gain through the association's work.

We have heard of but one reason thus far which, on the surface, may seem to merit consideration, and that is that the organization is a pecan booster club rather than a national nut growers association. While we concede its activity in disseminating reliable information regarding the pecan, it is certainly within its province to do this, especially on account of that nut's superior merits. Other nuts have not been overlooked, while the pecan activities have served to attract attention to the latent possibilities of other nuts in other sections of the country. Results are in evidence with the Northern Nut Growers Association, the Georgia Florida Pecan Growers Association and the several bodies of a more distinctive commercial character.

We are unable to see any sufficient reason for making the change of name proposed. Any substitute would circumscribe the field now occupied. It would destroy that prestige and usefulness

which is now a most valuable asset for the industry. It would be an admission that the association had been imposing on a confiding public, and a mere change of name would weaken rather than strengthen the organization.

If things are not right let them be corrected. If the field is not properly cultivated, the way for improvement is open.

The history made during the past fifteen years of nut culture is a record of achievement. The same agencies can still carry forward the work with increasing efficiency and volume by following the same principles, backed by the accumulated experiences of the present and future members, while new conditions, improved methods or any needed modification of operations can all be accomplished by wise administration under the present name.

In this connection, it may be well to recall the incident that led to the adoption of the association's name. At the initial conference held at Albany in November, 1901, and at the meeting of the organization committee in Macon in May following the name in use was the Southern Nut Growers Association. The committee which prepared the constitution adopted at the Macon convention in October, 1902, used the same name in the draft submitted for consideration. Before the report of the constitution committee was submitted to the convention the word National was substituted for Southern in the proposed name, as the wide interest manifested in the movement greatly enlarged the vision of opportunities that awaited the organization.

This association leads the industry. It merits the public position it occupies. It has still greater things to accomplish and cannot afford to jeopardize its standing by a change of name which would be, in fact, an admission of dereliction of which the body has not been proven guilty.



THE ENGLISH WALNUT

CULTIVATION of the English walnut is not only one of the newest but one of the most rapidly growing industries in the United States; and of course the reason for this is readily traced to the fact that this country is producing only about one-half enough of these nuts to supply the demand.

The Persian walnut, commonly called the "English walnut," was named "Nut of the Gods," nineteen hundred years ago by the Romans, and by them was distributed throughout Southern Europe, where descendants of these original trees

are now standing—some of them more than a thousand years old—lasting monuments to the men who conquered these countries. In many places these same trees are producing a large part of the total income; in truth, the United States alone is importing more than five million dollars worth of nuts from these trees every year, and about half a million dollars worth of their timber. English walnut timber is very valuable, having a handsome grain and being unusually heavy, so heavy, in fact, that the green wood will not float in water. The wood is used in the manufacture of gunstocks

and furniture, having a greater value than mahogany. Single trees have been known to sell for more than \$3,000.

Realizing the importance of having a home supply of English walnut trees, France passed a law in 1720 prohibiting the exportation of the timber. How well advised was this move may be appreciated now when it is known that the United States is importing annually from southern France a large percentage of our total consumption of 50,000,000 pounds of English walnuts.

The Romans did not neglect England; for as a result of their invasion, many of these fine trees, hundreds of years old are scattered along the roads and drives in every part of the islands. Some are nearly a hundred feet high with a spread of more than a hundred feet and bearing thousands of nuts for their owners every year. One tree is reported to be more than a thousand years old and to produce more than 100,000 nuts a year, being a chief factor in the support of five families. In England, by the way, it is customary to eat the fresh nuts, after the removal of the outer skin, with wine, the two dainties being served together.

The Germans, also, were quick to discover the great intrinsic value to their country of these trees, and very early formed the habit of planting a young English walnut tree to take the place of one that for any reason had been cut down. The Germans were also said to have promulgated in certain localities a law which required every young farmer intent on marriage to show proof that he was the owner of a stated number of English walnut trees.

It is believed that the first English walnut tree in this country was planted by Roger Morris in 1758 at what is now known as Washington Heights, New York City. George Washington must have found that tree in 1776. Just one hundred years later Norman Pomeroy, of Lockport, N. Y., found a tree in Philadelphia, possibly a descendant of the original Morris tree. Mr. Pomeroy's tree was loaded with an exceptionally fine variety of sweet-flavored nuts, thin-shelled and with a very full meat. That very tree, with Mr. Pomeroy's help, was the progenitor of all the English walnut groves in Western New York, as well as of the many fruitful and ornamental trees now growing in all parts of the north and east.

Experts say that there is no good reason why this country should not raise at least enough English walnuts for our own needs, and even export a few million dollars worth. We are now importing more dollars worth of these nuts than both Canada and the United States are exporting in apples—and this, too, when Canada and the United States are known as apple countries.

California is producing about 12,000 tons a year. That state's crop last year would have been more than 13,000 tons had there not been three days of extremely hot weather about the middle of September, the thermometer registering 115 in many of the walnut sections. This torrid period undoubtedly burned about 2,200 tons of walnuts, yet the crop realized more than three and a half million dollars.

The California growers do not have the frosts to open the outer shucks that we have here in the east, but they overcome this drawback in a great measure by irrigating a few days before the nuts are ripe. They begin the harvest the last of September, gathering the nuts which have fallen, drying them in trays for a few days, then taking them to the association packing houses, where they are bleached and sacked. The association does the shipping and marketing, the grower gets his check on delivery at the warehouse. For there is no waste and the nuts are all sold before the harvest begins; in fact, often oversold.

In some of the old missions of California there are English walnut trees more than one hundred and forty years old, with trunks four feet in diameter. There are many of these ancient individual trees throughout the state, but the oldest of the orchards are from thirty-five to forty years. Some of these trees have a spread of 80 feet or more and the growers consider that an English walnut orchard will bear profitably for at least two hundred years.

If trees will do this in irrigated sections, they will live and grow much longer in unirrigated places, for it is well known that the roots of trees not irrigated go much deeper into the sub-soil and get the moisture and nourishment which this sub-soil furnishes. The roots of irrigated trees remain nearer the surface and they are not so long lived.

As a ornamental tree the English walnut is unsurpassed. It has a light bark and dark-green foliage which remains until late in the fall, being shed with the nuts in October and never in the summer. It is also an exceptionally clean tree and is beautifully shaped, and so far as known has never been preyed on by the San Jose scale.

The demand for this nut is rapidly increasing, as its great food value is becoming better known. Its meat contains many times more nutriment than the same amount of beef steak.

The price is keeping pace with the demand, the growers now receiving three times as much for a pound of nuts as they got a few years ago when they were producing only a tenth of the present output.

(Continued on page 118.)

The Nut-Grower

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.

— 3 —

The careful orchardist will see that his trees are closely inspected as soon as the growing season is over and that all diseased and dead wood is removed and burned. This will help in the control of insect pests and fungus troubles.

Lower Baldwin County, Alabama, got on the pecan map in 1911, when the National Nut Growers Association met at Mobile. Even then that section was in the public eye on account of the Satsuma orange. Since that time both of these industries have assumed extensive proportions, while the section is enjoying its full share of development along general agricultural lines.

In the search for an ideal pecan nut there is a tendency towards simplifying the essential requirements as well as toward a modification of the most important requisites. Size is now important only when accompanied by quality and plump kernel. Quality even is giving place to the tree which is productive and resistant to insects and fungus troubles. Even the cracking quality must conform to the requirements of power crackers, and then comes in the varying marketing conditions, which must not be overlooked.

When the Northern Nut Growers Convention opened in Rochester last year, the Indiana pecan at once took a position of commanding interest. Mr. Thos. P. Littlepage who is well known as a Washington lawyer, as well as an Indiana pecan grower, quoted an inscription which can be seen in the Congressional Library: "Of Law there can be no less acknowledgement than that her voice is

the harmony of the world." Continuing, he said that since the voice of law is sometimes silent, it speaks through those in authority. This necessitates some emblem of authority, which he was pleased to furnish the association in the form of a gavel from the wood of an Indiana pecan tree. A duplicate gavel was also presented to Dr. Smith, the president as a personal souvenir. It would seem from this that the pecan sways the scepter in the Northern as well as the National association.

Walnut culture in sections of the country where pecan growing is not practicable has many attractions and many advocates. However, much as we may desire a wide extension of walnut planting, it seems that soil requirements enter largely into the question of the successful growing of this fine nut as a commercial crop, and limits it accordingly. Even in California and the extreme Northwest suitable lands are recognized, while others are known to be lacking in some respects, so that the selection of a suitable site for the orchard is of primary and essential importance. Doubtless there are equally suitable lands in various other sections, but the plantings thus far have not generally been governed by the care exercised in sections where the industry has assumed commercial importance.

THE ENGLISH WALNUT

(Continued from page 117.)

Thus it may be seen that the planting of English walnut trees not only is an exceedingly lucrative venture for the present generation, but it means the conferring of a priceless boon upon generations to come. Some states are considering the advisability of planting these trees along the new state roads, after the custom in England and Germany, where practically all the walnuts are distributed along the drives or serve as ornamental trees upon the lawns. There is one avenue in Germany which is bordered for ten miles by enormous English walnut trees which meet in the center, thus forming a beautiful covered lane, and at the same time yielding hundreds of dollars worth of nuts each season.

It is the custom in England and Germany to lease the trees to companies which pay so much for the privilege of harvesting the nuts, thus attaching to the trees a value similar to that of gilt-edged bonds, yielding a steady income to the owners with no work involved.

Beside the demand for the English walnut as a table and confectionery delicacy, they are often used for pickles, catsup and preserves, and in France many tons a year are turned into oil, furnishing a splendid substitute for olive oil.

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PECAN TREES**NURSERYMEN—AND—PLANTERS**

Be your wants large or small, we can fill them from our fine blocks of trees.

It will be greatly to your advantage to write us for terms and prices.

Our stock will please the most exacting.

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WALNUTS**

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WINCHESTER, TENN.

**WITH THE EDITOR AND
HIS CORRESPONDENTS**

MR. PRICE'S PECAN
Editor Nut-Grower:

Your notice of my pecan distresses me a little, as the way you put it in your well-meaning headline and foot-note. It is an unnecessary annoyance to my good friend Risien, of the San Saba.

I'll appreciate it very much if you'll put a correction in your

next issue, changing my farm address to Junction, Tex., (Houston is my business address only) stating incidentally that the improvement claimed for my nut in point of quality was in only the "cracking quality," as in point of flavor the San Saba has no superior.

R. S. PRICE.

Junction, Tex.

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Line****"The Standard
Railroad of the
South"**

SEE A. C. L. TICKET AGENTS
REGARDING SUMMER
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ETC., TO VARIOUS SUMMER
RESORTS

Passenger Service Unexcelled

**THE CONVENTION PRO-
GRAM**

Mr. Wm. P. Bullard, Secretary of the National Nut Growers Association, announces the program for the 1916 meeting, as far as arranged, as follows:

Wednesday, Nov. 22, 10 a. m.

Call to Order.

Invocation, Rev. J. G. Venable, Jacksonville, Fla.

Address of Welcome:

For the City of Jacksonville,
Hon. W. A. McRae, State Com-

missioner of Agriculture, Tallahassee, Fla.

For the Chamber of Commerce, Geo. F. Leonard, Secretary.

Response to Addresses of Welcome, Ex-Senator Marion Butler, Washington, D. C.

President's Address, Prof. W. N. Hutt.

"Waluts in Pennsylvania," Prof. F. N. Fagan, the Pennsylvania State College.

"Walnut and Filbert Industry

We are
Cash Buyers of Pecans



Whenever you have any to offer get in touch with us. No quantity too large. Will buy to advantage Seedlings.

R. E. Funston Dried Fruit & Nut Company
 ST. LOUIS, MO.

in the Northwest," J. C. Cooper, President Western Walnut Association.

Wednesday, Nov. 22, 2:30 p. m.

"Filbert Tests in Western New York," Jas. B. McGlennon, Rochester, N. Y.

"The Ornamental Side of Nut Culture," R. C. Berckmans, Augusta, Ga.

"Experiments in New York State with the Hardier Varieties of Pecans," J. Fred Baker, Director of Forest Investigations, New York State College of Forestry, Syracuse, N. Y.

"Self Sterility Problem in Pecan Culture," H. P. Stuckey, Acting Director Georgia Experiment Station.

"Status of the Pecan in Indiana," Meredith P. Reed, Vincennes, Ind.

Wednesday, Nov. 22, 7:30 p. m.

"West Texas Pecans," Prof. J. A. Evans, A. & M. College of Texas.

"Latest Method of Top-Worked (Lecture) Prof. E. J. King the Pecan and Hickory," (Il-Kyle, Dean of the School of Ag-

riculture, A. & M. College of Texas.

"Practical Experiences in Top-Working the Pecan on Hickory," General Discussion by Leading Experimenters.

Thursday, Nov. 23, 9:30 a. m.

"Relation of the Farm Journal to the Nut Industry," H. E. Stockbridge, Atlanta, Ga., Editor Southern Ruralist.

"Pecan Insects and the Possibility of their Control by Parasite Inemies," John B. Gill, in charge Federal Investigations in Florida.

"Pecans from the Viewpoint of the Georgia State Board of Entomology," E. Lee Worsham, Atlanta, Ga., State Entomologist.

"Rosette of the Pecan: Practical Experiences, Observations and Conclusions," H. K. Miller, Monticello, Fla.

"Nuts the Ideal Food for the Nation," Dr. J. H. Kellogg, Battle Creek Mich., Superintendent Battle Creek Sanitarium.

Thursday, Nov. 23, 2:30 p. m.

"Machinery of the Nut Orchard," J. C. Britton, Albany, Ga., followed by General Discussion

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For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

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Largest receivers of Pecans on this market. Get in touch with us, we are sure to satisfy you and that you will become a steady shipper. Write or wire us any time you have pecans. Send samples and quote lowest price.

REFERENCES: Bank of Orleans, Metropolitan Bank, all Railroads and Express Companies

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Should be applied in purchasing nursery stock and we warn prospective planters to

BEWARE

of the small, back-yard concern that, on account of prevailing conditions, is offering inferior stock at low prices. In the end this is a poor investment.

A QUARTER OF A CENTURY

we have been in the nursery business and hope to remain in it another like period, therefore we safeguard our reputation by supplying our customers only with dependable stock.

OUR PRICES ARE REASONABLE

on high-grade PECANS, CITRUS, PEACHES, PLUMS, FIGS, GRAPES, ROSES, ORNAMENTALS, etc. Write for prices to

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Poland Plantation Nurseries**Monticello, Fla.**

by Herbert C. White, Putney, Ga., B. W. Stone, Thomasville, Ga., F. T. Ramsey, Austin, Tex., and others.

"Soil Building in Nut Culture," A. S. Perry, Cuthbert Ga., followed by General Discussion by Prof. W. N. Hutt, Raleigh, N. C., H. Harold Hume, Glen St. Mary, Fla., Theo. Bechtel, Ocean Springs, Miss., M. Falkner, Waco, Tex., D. C. Turnipseed, Union Springs, Ala., J. B. Wight, Cairo, Ga.

"Nut Associations in the United States and their Work," C. A. Reed, Bureau of Plant Industry, Washington, D. C.

Thursday, Nov. 23, 7:30 p. m.

"Some of the Problems that have Been Met and Overcome by the California Walnut Growers Association," C. Thorne, Secretary, Los Angeles, Cal.

"Practical Co-operative Marketing," B. L. Hamner, Norfolk, Va., General Development Agent, Seaboard Air Line Railway Company.

"The Co-operative Selling Exchange—Its Uses and Abuses," Chas. E. Bassett, Washington, D. C., Specialist in Co-operative Organization, Office of Markets, United States Department of Agriculture.

Friday, Nov. 24, 9:30 a. m.

"The Marketing Problem," J. M. Patterson, Putney, Ga.

Report of the National Pecan Growers Exchange, Col. C. A. Van Duzee, Cairo, Ga.

Report of Secretary.

Selection of Place for Next Meeting.

Election of Officers.

Report by Committee on Resolutions.

Friday, Nov. 24, 2:00 p. m.

The local committee of arrangement has planned to entertain the delegates to the convention with an extended automobile tour, leaving the Hotel Seminole headquarters at 2 o'clock in the afternoon. The ride will include a tour of the city, inspec-

tion of the municipal docks which have just been completed, and a trip over the Atlantic Boulevard to Atlantic and Pablo Beaches.

NOTES ON VARIETIES OF PECANS

By J. B. Wight.

Read at 1916 Meeting of Georgia-Florida Pecan Growers Association.

STUART—A healthy, vigorous grower; reasonably good bearer; among the latest to put out in spring and hence never hurt by cold; nuts well filled. Has thick husks, and therefore very subject to husk worm; rather liable to rosette; very little scab; freely attacked by case bearer. A safe variety to set.

FROTSCHER—Healthy and vigorous grower; good bearer in favorable seasons, but very liable to shed nuts in dry season. Quite subject to case bearer; considerable rosette; very little scab. Succeeds over a more limited territory than some other varieties.

SCHLEY—Good grower and early bearer; very thin shell; finest flavor of any of the standard varieties; productive; moderately subject to case bearer, though little affected by rosette; rather liable to scab. Its greatest weakness with me is its extreme susceptibility to kernel spot. But for this it would stand very nearly or quite at the top as an all purpose nut.

VAN DEMAN—Growing in favor; healthy and vigorous grower, though does not come into bearing quite so early as some varieties. Seems to be a good bearer after it has reached eight or ten years of age. Moderately subject to case bearer; little scab and rosette. Recommended for orchard setting.

DELMAS—A good grower and an early and prolific bearer. Moderately subject to case bearer. Scabs rather severely in wet seasons. Recommended as a

reasonably safe variety for orchards. A 9-year old orchard of Delmas, near Cairo, Ga., yielded last year \$128.00 gross per acre.

SUCCESS—Does well in some orchards and in others only a few miles away is a practical failure on account of scab and kernel spot. Where successful is a good yielder of well filled nuts. In my own orchard it succeeds poorly.

NELSON—Big, burly and good looking, also a prolific bearer, but unreliable in that it does not fill well. Tree a good grower but quite susceptible to case bearer. A few may be grown for size, but not recommended to be set largely for commercial orchards.

CURTIS—A splendid variety of medium size, thin shell and excellent flavor. A good grower; quite free from case bearer, rosette and scab. Bears well only in alternate years. May prove profitable for market. Very slightly affected with kernel spot.

GEORGIA—Worthless on account of its extreme susceptibility to scab.

PABST—Value not yet established. Rather late in coming into bearing. Healthy in growth and foliage and reasonably free from case bearer. Nut of medium size and flavor. May be valuable for orchard planting.

MONEYMAKER—A strong, healthy and vigorous grower, and an early and prolific bearer. Among the freest from insects and fungus troubles of any variety. Well worthy of consideration for commercial orchards.

ROME—A fairly good grower and bearer, but its thick shell and lack of filling qualities likely make it of little if any value as a commercial variety.

MOORE—A strong, healthy grower and an early and prolific bearer. Its size is its weakest point. Its favorable qualities, however, may make it a valuable acquisition for the orchard.

It is infested to only a slight extent by case bearers. One of the earliest to ripen.

WAUKEENAH—This variety has the same good qualities as the Moore and may become valuable. About two weeks later than the Moore in ripening.

HALL—A good bearer, but its great susceptibility to scab and kernel spot make it valueless. It fills very poorly.

MOBILE—Vigorous grower, heavy bearer. Fills very poorly, especially in sandy soils; unreliable for orchard planting. Fills better in the heavier soils of middle and north Georgia.

PRESIDENT—Medium sized nut; heavy bearer; free from scab. Bears in alternate seasons. Value not yet established.

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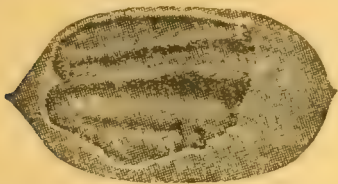
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Price Delivered to L. J. Sharpe, at Commerce, Ga., 500 each of budded and seedling pecan trees, 2 to 3 inches in diameter at the ground. Give height of rough bark.

Wanted—Offer for one hundred seven year pecan trees, five acre grove near administration building, Saxonia Plantation, Tallahassee, Fla. **G. C. ATKINS, Maplewood, N. J.**

Southern Growers with nuts for sale will do well to submit samples with prices on round lots to **QUINBY-STEWART CO., Jacksonville, Fla.**

SICILIAN ALMOND CROP

Consul Haven at Catania, Italy, reports that the almond crop of 1916 will be good, exceeding in quantity that of 1915. The blossoming season passed without incident, there being neither heavy winds nor hail, so that the trees are well covered with nuts.

PLANT BLACK WALNUT

Because of the very high lasting qualities of its wood and the moderately rapid rate of growth of the tree in good locations, black walnut is one of the few most desirable trees to plant on the farm. Small patches of rough gullied, or unused land about the farm and narrow strips along fence rows and highways or corners of barnyards and stock lots make ideal places for planting this valuable tree. The method is simple, and the present heavy crop of nuts makes this year a most favorable time to begin work along this line. The region where walnut growing is practicable extends from southern New England west to the Central States and south to South Carolina and along the northern portions of the Gulf States to Oklahoma. The finest growth takes place in the rich coves of the lower Appalachians and over the Ohio and Central Mississippi basins.

The black walnut tree is compact, particularly the wood. The price of black walnut lumber in recent years has been consistently high. Another factor to be considered is the rapidly diminishing supply of walnut trees over practically its entire range in the United States, due to recent cutting in order to meet the demand for gun-stock material. The tree yields durable wood which may be used for posts and for a wide variety of purposes about the farm, in case it is not sold in the lumber market.

In order to succeed well, walnut requires a rather good grade of soil, hence no attempt should be made to plant it on poor, thin soil or on hot, dry exposures. Favorable situations for rapid development are on strong limestone soils, deep alluvial soils, and stony loam soils along the margins of highlands. Since the walnut tree requires a large amount of light, it may be successfully planted on open tracts recently cleared of old growth and on recently abandoned fields. In this respect it resembles black locust, which, however, grows faster, but in many localities is more or less subject to serious attack by a wood-boring beetle.

The walnut crop was particularly heavy this year, affording a splendid opportunity to gather or buy seed for planting. Nuts should be stored over winter and they are best stored in pits dug in the ground, the bottom of the pit being covered with leaf litter or straw on which a three inch layer of nuts is placed, then a layer of litter and so on, covering the whole with soil so as to leave the surface a few inches higher than the general level. Planting should be done about the time germination begins. In eastern United States north of the Gulf States, this is during the month of March and early April. Squirrels, chipmunks and hogs are serious pests if present in numbers and would more than likely succeed in making away with a majority of the nuts if they are planted in the fall. Small tracts, however, surrounded by cultivated fields and other places where these animals are known to be scarce might safely be planted in the early or late winter when labor is more accessible than in the spring.

To plant the nuts, make a small hole with the mattock or hoe, drop in one or two nuts in each hole and cover them with about two inches of fresh, firm-

ly packed soil. For the larger areas, a good spacing in forest plantation is to dig the holes eight feet apart each way, or eight by ten feet, which amounts to 680 and 545 holes per acre for areas, or along fence rows and highways, the spacing should be about eight feet in the row, unless permanent shade is desired, in which case the distance should be twenty feet during the early period of growth and subsequently increased to forty feet by removing the alternate trees. For purposes of nut production, the trees should be spaced at distances of forty to sixty feet apart and should be given a due amount of cultivation. The number of nuts required can easily be found by knowing approximately their quality the area of the ground to be treated and the spacing. Care should be taken not to plant under shade. Where the trees in the old wood lot are to be cut, during the next year or two and are moderately open, planting might begin now, so as to get a start in advance of the removal later of the overhead protection against early frosts and excessive drying of the soil in midsummer.

While the best results are usually obtained by completely preparing the soil and cultivating it for a few years after planting, farm owners should be aware of of the possibilities of starting at the expense of only a little labor. This will be a good step in the process of securing useful and money-making trees on parts of the farm which would perhaps otherwise be waste land, making no return at all to its owner for its cost in care and taxes.—Weekly News Letter, Department of Agriculture.

SOME THOUGHTS ON NUT MEATS

In the course of an article on a possible walnut meat industry in California, J. G. Erneike, in a

THE NUT-GROWER

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Nut Tree Sale



Owing to the fact that we are changing our nut nursery business from Boonville, Indiana to Bowie, Maryland, we are prepared to offer the wholesale trade for fall delivery several thousand fine, hardy, budded and grafted northern Pecan trees on three and four year old stocks. These trees are the standard northern varieties and are as fine as any ever produced. We will quote wholesale prices on request on lots of fifty or more.

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E. M. LAND, Goldsboro, N. C.

recent issue of the California Cultivator makes some pertinent remarks that are of interest to growers of nuts other than walnuts. He says:

Buy a bushel of corn in the ear, shell it, sell it, and your returns will cover the original cost, the cost of the shelling and perhaps a little profit. Now buy three pounds of walnuts, crack them, pick out the meats and grade them, sell them, and be short of covering the cost of your three pounds of walnuts, to say nothing of the labor you do not believe that this can possibly be true, try it for yourself and you will find that here is a case where "truth is stranger than fiction." It seems to be a topsy turvey conditions of things on the face of it.

Do people buy walnuts just for the fun of cracking them? Perhaps a few people do. The bulk of customers, of course, buy them for their meats, and often prefer to be relieved of the trouble of cracking the nuts in order to obtain the meats. There is a large consumption of walnut meats on the part of bakers, confectioners, cooks, etc., none of whom could afford to stop and crack the nuts.

As far as California walnuts are concerned, the walnut meat industry is still quite young and undeveloped. We have not yet reached the point France has reached, namely that of shelling out what may be styled "good walnuts. We only shell out our "culls." Culls may be of varying degrees of goodness. Some are culls only because of the exterior blemish of the shell, some have excellent meats, some have poor meats or none. The good meat of culls is the equal of the good meat of walnuts. Why should they bring the grower less money? The poor meats of culls, being shelled, are a known quantity; the poor meats in walnuts are an unknown quantity. But

the grower does not ask or expect the price of good walnut meats for poor ones.

The different grades made of walnut meats must stand entirely on their merits. No hiding of defects is possible. Therefore, it would seem that an open faced honest, straight goods article should command a price in the market that is in proportion to the price of walnuts. But that is far from being the case.

It is urged by a few that we must not expect culls to yield good returns, that we can not and do not expect it in the case of oranges. However, the case is not parallel. Both walnuts and walnut culls yield us exactly the same thing, namely, walnut meats. You could never tell whether a certain walnut meat came out of a blemished or unblemished shell. Walnut meats can be shipped as far as walnuts, can be kept in good condition for a long time if properly cared for, just as walnuts can be shipped and kept. I can, of course, not say that a pound of culls should bring the price of a pound of nuts, but I am saying that a pound of good meats obtained from culls should bring the grower at least as much as a pound of meats still in their shells in the walnuts. But far from it.

How does this matter stand with the consumer? When the housewife wants to serve shelled walnuts in any form she has her choice of two ways of obtaining them. She may buy walnuts and crack them or call for shelled walnuts. She wants a pound of meats, and to obtain them she must buy two and a half to three pounds of walnuts. (The percentage of weight of meats to weight of nuts will run 30 per cent to 50 per cent. The average of ordinary good nuts is between 35 and 40 per cent.) She pays 25 cents per pound, guaranteed cracking test 85 per cent. Thus the pound of meats

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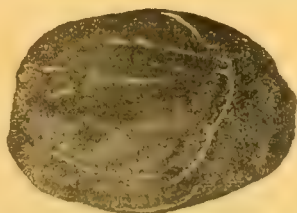
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will cost 65 to 75 cents. She spends probably not less than one-half hour cracking the nuts, especially if she desires to get as many halves as possible. It is quite an expensive pound of nut meats. The next time she buys shelled meats and pays from 65 to 85 cents per pound, and if put up under a guaranteed and reliable brand, she prefer in future to buy walnut meats in the place of walnuts, because she has been saved much time and trouble. The grower received for this pound of meat less than 20 cents, including the pay for his labor. For the same weight of meats still in the walnut shells he received 35 to 40 cents and there was no labor expense.

Here is a condition which has come about slowly and imperceptibly. It could not become very oppressive until the growers' output of culls became sufficiently large to count for something. For the last three or four years the desire to change this condition for the better has made itself felt, and is now beginning to culminate in a co-operative effort of at least those walnut growers that belong to the associations.

The first few sacks of culls that came from the orchard were a negligible quantity. Perhaps they were cracked for home use or pounded up for the chickens. But with the output of good nuts the output of culls also increased. One large ranch in Orange county had twenty tons of culls the past season, and many growers had about one-third of their crops as culls.

The conditions today have therefore become a matter of serious consideration for the grower, and to help in the solution of the problem the writer began last November to investigate the walnut meat industry, or the disposal of walnut culls in California.

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AN EXPERT OPINION

May 22, 1916.

Mr. Wm. P. Bullard,
Albany, Ga.

Dear Sir:

Replying to your inquiry as to my opinion of your pecan nursery stock will say that I have planted several thousand of them in different seasons and do not hesitate to say that they were the best pecan trees that I ever had experience with.

I have worked continuously in the pecan business for the past fifteen years in Georgia and Florida and for the past seven years have had charge of the field work of a 950 acre pecan orchard near Albany. I have planted trees from most of the prominent nurseries grown in the States of Georgia, Florida, Mississippi, Louisiana, Texas and Alabama; in fact, during my pecan experience I have planted from 50,000 to 60,000 of these trees and therefore think I am well qualified to express an opinion on the merits of a pecan tree.

For several years past I have been familiar with your methods of growing, digging and handling of nursery stock and do not hesitate to state over my signature that I prefer your trees over those of any I ever planted or ever saw planted.

E. H. CHESTER.

Prices and Literature on Request

Wm. P. Bullard, Albany, Ga.

The Nut-Grower

Volume XV

September 1916

Number 9



NO two men can take a thing just alike; and very few can sit down quietly when they have lost a fall in life's wrestle, and say: "Well, here I am, beaten, no doubt, this time, by my own fault, too. Now, take a good look at me, my good friends, as I know you all want to do, and say your say out; for I am getting up again directly and having another try."

THOMAS HUGHES.

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ITEMS OF INTEREST

The Bureau of Crop Estimates,
Department of Agriculture, has in-
cluded the pecan in the list of prod-
ucts scheduled for attention.

The University of Florida Experi-
ment Station is to conduct experi-
ments in an Alachua county pecan
grove in an attempt to determine a
remedy for rosette.

A Van Deman tree at Ocean
Springs, Miss., which made a record
of 100 pounds of nuts at ten years
from planting in the season of 1910,
has since then for five successive
years averaged 112 pounds a year.

Nuts of the coyol palm, a native
of Central and tropical South Amer-
ica, furnishes food for the natives,
while cattle eat them as they fall
from the trees. The nuts are sup-
posed to have a commercial value,
as the oil content compares favor-
ably with other palm oils.

Oil expressed from the calmpang
nut of the Philippines can be used
in the same manner as olive oil and
should be useful for culinary pur-
poses. In color it is light yellow, is
sweet and has a comparatively high
melting point. It is said to have a
similar physiological action as olive
oil, which it resembles.

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W. C. JONES, Proprietor
Successor to Wight & Jones

airo, Ga.

THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., SEPTEMBER 1916

NUMBER 9

FERTILIZERS AND SOIL BUILDING

By HERBERT C. WHITE

Read at the 1916 Meeting of the Georgia-Florida Pecan Growers Association

I AM afraid that any full discussion of this vast subject is out of the question in a paper of this character and I am therefore compelled to deal only in broad generalities, merely touching on some of the first principles of soil fertility. I suggest that those who are unfamiliar with the subject obtain some of the numerous works covering the subject, which with your present knowledge and experience will enable you to better comprehend the infinite details and ramifications involved in the study of fertilizers and soils, and the practical application of the knowledge thereby gained.

In the introduction to "The Soil," by Prof. King, of the University of Wisconsin, the following occurs:

"It was early one morning late in October after there had been several very severe frosts that a fox squirrel, either by chance or in deliberate search, passed under a large tree and found the ground thickly strewn with butternuts. All night these nuts had been falling by ones and twos until now the ground was nearly covered with them. As some other squirrel had done, one, or maybe two hundred years before, so did this one take a nut and hurrying off to a secluded spot bury it in the soil beneath the forest mould. Why this was done, whether with the intention of recovering it for a future meal, or whether, like a deliberate forester, he planted it that another tree might grow, only that squirrel knew. It lay there in the ground the winter through, but in the spring, as with a thousand seeds of other kinds its obstinate shell opened without a jar or sound. Water crept in and the rich oil, stored all winter in the meat, rapidly changed to sugar, so that out of this and other materials borne along in the streams of water which were now setting in from the soil, the tiniest cells began to form, some building a stem upward into the sunshine and air and others building rootlets downward and outward into the darkness and dampness of the soil. As the building or growth went rapidly on, it was not long before the materials stored in the nut and which induced the squirrel to carry it away, had all been used, but not, however, until, as a result of this use, there stood in the rich, dark mould a perfect little butternut tree with its roots brought into contact with the water among the soil grains and its green leaves spread where the throbbing pulses from the rising sun shall be made to pump the water and do the work of building a great forest tree."

There is a wealth of knowledge necessary in order to understand or comprehend the marvellous processes of Nature in the germination, growth and development of that tree, both above ground and beneath.

Prof. Vivian of Ohio, who wrote "The First Principles of Soil Fertility," said that "Agriculture is not merely a business, but an art as well—the art of producing plants and animals that are useful to man." A few years ago "anyone could be a farmer." It was only necessary to sow and reap, for Nature dealt lavishly with man and gave to him freely of the fertility she had been storing up for countless ages. A system of extravagant and unbusinesslike farming has so impoverished the soil in some parts of our country that many farms have ceased to be profitable." to which I add, without the annual use of great quantities of commercial fertilizers which contribute nothing to permanent soil building and which, as a matter of fact, are becoming prohibitive in price, particularly potash, as you all know.

It must be remembered that fertility means far more than a mere abundance of plant food, whether available or otherwise. Water, season, tillage, humus constitute leading factors in determining a productive soil. It is assumed that the plant is suited to the soil, bearing in mind the fact that most plants show preferences for certain soils.

It is obviously impossible here to go into the many types of soil throughout the country, and should specific information be needed it can be obtained from the Bureau of Soils in Washington, your State Chemist, Geologist, College of Agriculture and in many cases from the Government Soil Survey of your county. In Georgia only some 1800 square miles have been surveyed and mapped, but in this insignificant area 255 soil types have been found.

Water is the most abundant ingredient in living plants. The water content of succulent plants runs as high as 98 per cent, and it is said that timber cut at the driest time seldom contains less than 40 per cent. This is a small part of the water used by the plant in its growth. Evaporation from foliage is practically constant and few realize the vital importance of an adequate moisture supply, not only to offset evaporation from soil and foliage, but also to convey the necessary nutritive materials from the soil. Innumerable experiments have been made to ascertain the amount of water actually used and transpired by plants and it is conclusively proved that it takes from 250 to 300 pounds of water for each pound of dry matter produced. This is approximately 36 gallons and does not include soil evaporation between the growing plants. Lawes & Gilbert, at the famous

English agricultural station at Rothamsted, as well as Hellreigel in Germany have demonstrated that a crop of one acre of corn of 60 bushels exhales 960 tons of water during its growing period, which is a little more than 8 1-2 inches of rainfall and does not include loss from soil evaporation. Can you imagine the evaporation from an acre of twenty-year-old pecan trees?

Both temperature and soils have a variable effect upon evaporation. Practically all this expert experimental work has been done in cooler climates than ours and with the higher temperatures here the requirements of plants are greater and more moisture necessary to get maximum results. The water supply is probably the most influential factor in the production of a crop, as poor soils do give good crops in seasons of plentiful and well distributed rain. The lack of moisture is an evil which no amount of plant food can offset and the influence of weather on crops is far greater than the influence of fertilizers. Great danger ensues to crops in dry seasons where heavy applications of high grade commercial fertilizers are used. I no longer recommend the use of complete high grade commercial fertilizers on pecan trees unless an abundant water supply is assured, which with our variable seasons is mere gambling, without irrigation. Strictly organic fertilizers are less dangerous than chemical ones. Benefits to fruiting orchards may occur by an application of ground phosphate rock and basic slag broadcast and turned into the soil with the humus crop at the early winter plowing. Those will help the legumes and cause more vegetation to be turned under. The last few years' experience makes me firmly believe that rosette has been caused by the use of high grade fertilizers in the spring where long dry spells have followed its application. Light rain has the water soluble portions of the ingredients to dissolve and come in contact with the feeding roots. Dry weather has followed, leaving the strong solutions in contact with the delicate roots, with the result that it has injured or destroyed them, leaving the tree with fewer roots and consequently less able to absorb moisture, with the result that its functions become unbalanced and the tree has more top than its roots can keep supplied with both moisture and food, moisture being the more important of the two. Too deep plowing in spring or summer does the same thing.

A serious shortage of rain since March 1 and May 23 has been prevalent throughout this region. Thomasville was short 44 per cent of the annual average, there having been only 5.1 inches against the average of 11.6 inches, which means a shortage of approximately 550 tons of water to the acre. Jacksonville is worse, showing only 31 per cent of the average; Savannah 55 per cent, Macon 36 per cent, Miami 50 per cent, Montgomery 56 per cent. The nearest point where more than the normal has fallen was at Mobile, where an excess of 8 per cent was recorded. These are the official figures of the United States Weather Bureau. In the Albany District there have been light rains here and there, but not general, and in the Putney and Hardaway neighborhood we have had far less than at Albany, only seven miles away, and the shortage is very great at both places.

All this brings us to the subject of tillage and the conservation of soil moisture, which is of paramount importance. As practically all soils naturally contain an abundance of plant food in a more or less available form, the province of tillage is to hasten the soil to liberate its vast stores of locked up plant food and at the

same time to conserve moisture, which we know can only be done by keeping the surface well stirred and the maintenance of a dust mulch and by the addition of humus. There is nothing more that can be done unless we irrigate. With the average annual rainfall in the Southeast Atlantic States, there should be no need of irrigation except for trucking and to take care of our orchards during such dry spells as we have experienced in the springs of the present and past year or two. With normal seasons and well distributed rainfall, I would advocate drainage as the more important.

For those who have not given these subjects close study, it may not be amiss to give some analyses of characteristic soils so far as their nitrogen, phosphoric acid and potash contents are concerned, in the first foot of soil. A sandy loam gave 3736 pounds of nitrogen to the acre, 7326 pounds of phosphoric acid and 28,669 pounds of potash. A clay loam showed 4789 pounds of nitrogen, 4935 pounds of phosphoric acid and 44,827 pounds of potash. A clay soil analysed 3250 pounds of nitrogen, 5600 pounds of phosphoric acid 12,600 pounds of potash. One of the Rothamsted soils, after being cropped for many years showed 2500 pounds of nitrogen, 2750 pounds of phosphoric acid and 6750 pounds of potash. The latest available information on the small area of Georgia soils that have been analysed indicates a variation of from 392 pounds to 15,000 pounds of nitrogen per acre; from 824 pounds to 10,400 pounds of phosphoric acid per acre, and from 5560 to 195,000 pounds of potash per acre. It may be safely said that an average of the above would be the average of all soils of any agricultural value. I have given these figures merely as illustrative of the latent potential powers of most of our soils and to emphasize the wealth of plant food awaiting liberation by time and hastened by intelligent tillage. The maintenance of soil fertility, in the light of the knowledge available, should not be so difficult. The atmosphere furnishes by far the greater portion of the materials found in the growing plant, the carbohydrates, fats and fiber being supplied by the ever present carbonic acid gas and moisture, while we and the soil have seldom to supply over 1 1-2 per cent of the plant, principally in the form of nitrogen, phosphoric acid and potash, of which there is already an abundance in the soil. There are, of course, other elements necessary, but in such relatively insignificant quantities that in most cases the slowly disintegrating soil will furnish them as fast as needed. Of the more important of these other essentials is lime, which has been used up in many soils. The need of lime can only be determined by experiment analysis and the usual tests for acidity. The Georgia State College of Agriculture has specified the necessary amount of lime required to correct acidity in the soils so far analysed. The lime required varies from nothing to 82,000 pounds per acre. Lime in this case means finely ground limestone and not quicklime. Your State Department of Agriculture will advise you as to testing your soil or they will do it for you if you will send samples. Many indirect advantages accrue from lime. It is of the greatest benefit to legumes and in liberating the locked up food in the soil.

The value of keeping the soil in a state of loose surface pulverization by continual shallow cultivation, preferably to a depth of three inches, during dry weather will conserve the maximum amount of water. The value of the addition of humus to the soil as an assistant conservator of water is often overlooked. Humus not only

makes the soil more retentive of moisture but greatly assists in the disintegration of the mineral matters of the soil by keeping a variable amount of moisture in contact with the soil particles and the acids generated in its decay. By the addition of humus to our soils and with proper tillage there is but little need for commercial fertilizers. I am speaking more particularly of nut trees and not for truck or tobacco crops, where the most intensive culture is necessary for the best results.


I have dealt a good deal on humus. The question is, how to get it? As a source of humus, barnyard manure leads, there being a well-authenticated case where its residual effects were discernable for twenty years. It is obviously impossible to obtain this in large quantities outside of the big cities, and since the advent of motor vehicles the big city supply has greatly diminished. The next best thing is to save it yourself through the medium of live stock, whereby 90 per cent of what you feed them can be returned to the soil. This is the basis of the most successful farming.

Fortunately, in the South, and particularly in our region, we have a number of both summer and winter legumes which give us both nitrogen and humus. Among the winter legumes are burr clover, crimson clover, vetch and Canada peas. For the summer there are cowpeas and the several species of velvet beans, of which I have tested 16 sorts, including the China and Yokohama. For soil building all are good, but where the greatest amount of humus is needed the China leads. The China is about three weeks earlier in maturing seed than the common speckled velvet bean, and for three seasons I have not failed to make a crop. It should be planted not later than the middle of May if seed is wanted but it will make a rank, luxuriant growth by fall if planted now. The Yokohama is not such a heavy grower, but can be planted until the middle of June in this latitude and mature seed before frost. The early speckled, or 90-day bean, is becoming popular on account of its great prolificness. It is not a very strong grower and should be planted much thicker than either the China or Yokohama. There is only one word of caution in planting the China bean in bearing orchards, and that is that if the summer is dry it will materially affect the size of the nuts, as, with its heavy foliage, it uses much of the soil moisture.

In conclusion, I will say that our whole policy should be to try and bring our soils back to their original and virgin condition and to return to the soil as much or more than we take out of it.

THE JUJUBE

By F. T. RAMESEY

SOMETIME in the indefinite past somebody brought over from China or Japan one variety of Jujubes. Of this importation there are found a few scattered thickets over Texas, and I have heard of one or more in Georgia. There may be others. The variety is furiously thorny. The fruit is the size and shape of a small olive, and is not so sweet or attractive in quality as those brought over by the national Department of Agriculture during the past few years, which we have budded on this old sort.

I have always had an idea that it was Admiral McCartney who brought in the first trees. When he was Admiral of the Navy of the Republic of Texas and peace prevailed, he had a habit of doing something useful by

sailing off somewhere and collecting anything that might be of value to the settlers in Texas.

If good experiment station men were placed in charge of idle warships in times of heavy peace, what valuable work they might do.

The jujubes multiply by suckering from the roots, similar to the old-fashioned Chickasaw plums, but they are not near so prolific of their suckers. The seed comes up readily and all we have grown have matured fruit the second summer.

Of the government's explorers, who search for anything valuable in trees, shrubs and grains, Mr. Frank N. Meyer is, I believe, the only one who has collected any jujubes. He had made three trips of approximately three years each, crossing China and Thibet on long trips from coast to frontier, and back again on a different route from the Russian frontier to the coast. I had the pleasure of having him stay with us last October as he returned from his last trip by way of Japan and California.

While they are common in parts of Japan, he considers that they were brought there from China. He found them in Central China, as common as peaches in our best peach belts, and appreciated by the natives above any other fruit. They have a reverence for it akin to superstition.

I do not know how many varieties of jujubes there are. Perhaps as many as there are of seedling peaches in our country. The prevailing shape is perhaps that of an olive, and in size they vary from that of an ordinary olive to three times that size or more, but there are some large round ones and small round ones, and the same of pear shaped ones and various others.

They are good to eat fresh and good stewed, but the greatest delight comes in eating them when prepared like dates. It is easily done by boiling in sugar water and then drying in the sun, and then repeating the process once or twice. Prepared in this way they have been coming across to California for many years, but they are so good that they rarely get over the Rockies.

If we had stocks on which to bud the superior varieties, or if they could be grown from cuttings, the country would soon have them on every farm and home lot. The trees seem to be utterly indifferent to the extremes of cold and heat and dampness and drouth, and are luxuriant alike in black land and sandy. They do not bloom until all chance of frost is over, so have never failed. They commence to ripen at Austin in the last days of June, and the last ones—a very long, slender variety—ripen to the very last of October, giving ripe fruit every day for one-third of the year.

The trees grow 20 to 25 feet in height and resemble a prickly ash more than any other tree. Though the color of the fruit when ripe is a dark reddish chocolate, those who see them for the first time are inclined to class them with plums.

One man in a spell of enthusiasm, after making some into superior dates, got off this:

If a prosperous trade
We find can be made
A-sug'ring the China ju-ju-be,
And we should get rich
Can you tell us which
Kind of a cousin would you be?

Among the new ads to be found in this number of The Nut-Grower is that of the Rhodes Manufacturing Co., of Grand Rapids, Mich. The implement they offer is needed in all up-to-date orchards.

The Nut-Grower

Published monthly by The Nut-Grower Company

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HOLDING SATISFACTORY HELP

One of the difficulties encountered in the successful operation of the pecan orchard is the obtaining and retaining of reliable and competent help by those investors who do not wish, or who are unable from any cause, to give personal attention to the practical work which is so essential to success. The men qualified for positions as superintendents of farm and orchard enterprises are not available to such an extent as the present needs require. Those who can qualify for employment command and merit a compensation much above that of the ordinary farm employee. Then as soon as his ability has been demonstrated, his services are desired by others who make him tempting offers of various kinds. Aside from this, the suitable man for such a position has the enterprise and initiative which enables him to get into business for himself, and thus profit more largely by his experience and ability. The practical man who is equipped for the work is the keystone which holds together in a business and horticultural way the entire organization. Without him, the capital, land, and equipment when assembled still needs to be properly co-ordinated to accomplish the desired results. Unskilled labor, or the tenant who rarely takes sufficient interest in his work aside from his personal profit, will handicap the orchard development if it does not dissipate the working capital. In the minds of those who have carefully studied the situation, the solution of this problem is found in the simple and practicable plan of taking a partner, who has the qualifications and qualities desired. Give him a substantial interest in the business. This he pays for in process of time with the services he renders. He is then working for himself and gives the best possible attention to his work. Besides he needs to stay on the job permanently in order to reap his share of the profits which he earns for the partnership. It is said to be less difficult to secure a desirable partner than it is to employ the desired kind of transient help.

This plan also opens the way for ambitious young men to get started and established in a promising industry, and attracts a superior grade of natural ability to the industry.

In this connection, we are reminded of the need of practical and convenient facilities for training men for horticultural services. The field is large and offers great opportunities, while the rapid development of various agricultural and horticultural industries, especially in the lower South, where the pecan finds its most favorable environments, depends to a great extent upon the skilled men who can properly organize and manage such movements as the resources and needs of various sections now afford. The editor's plan for a training school are not yet sufficiently complete to describe at this time, although we are ready to entertain proposals for enrolling students in a limited way and putting them to work.

Indiana is showing some profitable pecan trees. One is reported as having produced enough nuts to make \$90 at 15 cents per pound. Another averaged as much for seven successive years, while a third gave an average of \$100 for three years.

An even one hundred dollars from ten Satsuma orange trees as the value of the crop for the fifth year from planting is the showing made by an exhibitor at the county fair held at Blackshear, Ga. The finest specimens of grape fruit, of the Duncan variety, and kumquats were also on exhibition by several growers.

Fifteen years ago last month the first issue of The Nut-Grower appeared. Its mission was to serve the then recently proposed Southern Nut Growers Association. Results at the Macon convention in October following justified its existence and for the years which followed the service has been continued.

A conference of nearly a hundred land owners was held at Waycross recently. Over a million acres of land in Southeast Georgia was represented. The meeting resulted in the formation of an association which will take up the work of developing cut-over lands. This section is practically new country, as viewed from an agricultural standpoint. It has, however, about everything needed except modern and energetic farmers.

It is said that there are 1,500,000 Satsuma orange trees in Mobile county, Ala., 900,000 in Baldwin county, Ala., 100,000 in Mississippi and nearly as many in West Florida. In ten years' time it is supposed the crop will amount to 8,000 cars. This industry represents an investment of \$5,000,000 and anticipations of its being worth four times that much when in full bearing may be contingent upon the control of the citrus canker, a serious disease which now menaces the industry. However, it is claimed that the Satsuma is not so seriously affected as are other citrus stock.

Pecan growers who in former seasons have sold direct to consumers and used the parcel post for making deliveries should aim to hold their customers from year to year, as well as add new ones to their list. The policy of the Pecan Growers League in urging the small producers to cultivate the home market is producing desirable results. There is hardly any town in the pecan belt that will not under good management consume all the local production, aside from those where large commercial orchards are located and where the crops are handled in a wholesale way and go almost entirely to distant market centers. It is simply good business to supply the home market before looking for other outlets.

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WITH THE EDITOR AND HIS CORRESPONDENTS

PLANTING PECANS

Editor Nut-Grower:

I am in the real estate business here and sell a good many improved farms as well as cut over timber lands. It has been found that pecans thrive in this section and I am repeatedly asked, "Does it pay to use dynamite to plant these trees?" In order to give pecan growers generally the benefit of my experience in this line, I am submitting this to you for publication.

I put out 298 pecan trees in February, 1915, using 75 pounds of dynamite, which with caps and fuse cost me \$15.00. I did not lose a single tree.

I have a neighbor that put out 46 trees in the same locality, in the same kind of soil and at the same time. He refused to blast his holes because of the expense. He lost 40 trees out of the 46 and is now replanting, blasting all the holes this time.

It cost me thirty cents a tree to set my trees out and it cost him twenty cents each to put his in the ground the first time. As all kinds

of explosives have advanced in price the past year, it is costing him about thirty-five cents per tree to replant, thus making his total cost of planting fifty-five cents per tree. In addition, he must count as expense what the trees that died cost him. My trees are all thoroughly rooted by this time, so he is just one year behind me and always will be.

I have been using explosives for planting trees for the last six years; have always had the best of results and absolutely refuse to put out any trees for myself or anyone else by any other method.

As the above is what I tell those who apply to me for advice on this subject, I believe the wider publicity which publication of this in your paper would give it would be appreciated by your readers.

L. B. FOWLER.

Shubuta, Miss.

PECAN NUTS (Contributed)

If I were to tell how many years' experience in nut culture it has been my lot to enjoy, your readers would

know very near the number of years of my life as the industry has been receiving attention at my hands for for lo, these many years.

The nut bearing trees on my father's farm in a northern state is where the interest started, and where the initial work of comparing varieties of shlll bark hickories began by laying in the choicest kinds for the winter supply. A few years later the idea of nut orchards came into mind, the thought being, "Why not nut orchards, as well as apple orchards?" which were then a part of every established farm. Following this thought as the years passed, the comparison of different nuts suited for commercial growing led to the recognition of the pecan as offering an inviting field.

About this time the discovery was made that horticulture was an attractive vocation, since my interests in this direction compromised a previously chosen profession. Then came the change of location to the lower South, which was known to have great horticultural opportunities and superior advantages in var- This made the growing of pecans a realty and realized the dream of early years to have a pecan orchard.

Seed nuts were planted within a few weeks from the time I landed in Georgia, which was twenty-eight years ago. A few trees were bought and planted the same season. A year later there were trees for planting several acres of orchard, as well as a number to sell, which furnished my first horticultural profits. Ever since, each season has had its quota of trees to be handled for myself or others, with the inevitable experiences that come from carefully planned and industrious operations. Six years intervened before the first nuts were produced. More recently I have harvested nuts from trees that had been planted only thirty months previously. It was during these early experiences that the advent of budded and grafted trees was marked. This simply revolutionized the business and marked the beginning of the development during the past 15 years that has astonished the horticultural world. This change from seedling trees to budded stock cut down the period from planting to bearing fully 50 per cent. It did more. It eliminated the uncertain character of the tree in regard to the size and quality of the nut and abundance of bearing.

Then came the great movement

under the fostering care of the National Nut Growers Association and its official organ. Many mistakes were made; frauds were perpetrated and failures resulted from ill-advised plans. Inferior trees were eagerly planted by some, while others failed to give proper attention to their investments. But through all these tribulations the well-grown trees of choice varieties continued to grow and are now actually yielding rich harvests.

The selling of the nuts has been an easy part of the work. The selling of orchards has been so popular that the writer has repeatedly parted with his orchards and planted better ones, and this program bids fair to be continued. The orchards planted during recent years for others widened the field of profitable operations and are furnishing ample demonstration of the practicability of my boyhood visions of a nut orchard.

It remains yet for the nut orchard to become an integral part of all southern farms and homes. Then the rich fruition of the pecan possibilities will be realized. Thus far the business has been built largely on probabilities. Through all these years the dominant thought has been that the pecan, under proper management in planting the orchard, furnishes a more safe and profitable investment than any other rural vocation that is open alike to all the people. That it is profitable at present is conceded, while the probabilities, as well as possibilities for the future are unrivalled.

In writing to advertisers be sure to mention The Nut-Grower. This helps the advertiser, the prospective purchaser, the publication and the industry.

NATURAL ENEMIES OF THE PECAN INSECTS

The work of the various observers who have contributed to our knowledge of the principal pecan pests has brought out the fact that natural enemies are of considerable importance in their control in nature. As example of the usefulness of natural enemies, it will suffice to state that the tussock moth is recorded by Dr. Howard as having 21 distinctive primary parasites. This does not include secondary parasites or other natural enemies. The pecan-feed-

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ing fall web-worm has a similar number, and both of these insects are largely controlled by their parasites, their fluctuation in numbers being dependent partly on the weather, but more on the direct operations of their smaller natural enemies. Ordinarily, these agencies can be expected to preserve the balance of nature, but in exceptional years when they are not so active, their hosts—the tossock caterpillars and web-worms—gain the ascendable trees is the result.

Among predaceous enemies are birds, which frequently destroy great numbers of certain forms of pecan insects, the praying mantis or rearhorse, the wheel-bug—a special enemy of web-worms, and *Podisus spinosus*, or spined soldier-bug. Even the eggs of pecan infesting insects are frequently destroyed by parasites, and it is desirable that the grower should know the difference between his friends and foes.—F. H. Chittenden.

NOTES ON PECAN DISEASES

By S. M. McMURRAN.

(Read at the 1916 Meeting of the Georgia-Florida Pecan Growers Association.)

The Brown Leaf-Spot Disease

While leaf-spot diseases of the pecan have never developed to a point where they seriously affect the growth of the trees in the orchard, they nevertheless not infrequently cause premature defoliation and conditions may arise in the future that will make it necessary to practice control measures. From this standpoint it appears desirable to put on record such observations and studies as have been made of pecan leaf diseases up to the present time.

The so-called brown leaf-spot of the pecan is a fungus disease, caused by *Cercospora fusca*, which is very generally distributed over the southern pecan growing territory and litgenerally distributed over the south-tle or no varietal resistance has been noted. The dark, reddish-brown spots, which eventually attain a diameter of 1-2 to 3-4 of an inch, are more or less familiar to all pecan growers and are so typical in appearance that there is little likelihood of their being confused with any other leaf trouble.

These spots usually begin to make their appearance about mid-summer, after the trees have completed a large part of their growth, and in

seasons favorable for the development of the fungus, not infrequently cause considerable premature defoliation by late summer or early fall.

During the season of 1914 a small block of Delmas trees near Thomasville were sprayed by the owner with Bordeaux mixture in an effort to control the scab fungus on the nuts. One of the Delmas trees and all of the other varieties were left unsprayed and furnished an adequate check on the control of the brown leaf-spot disease, which was controlled incidentally, though effectively, by the spraying for scab.

Five sprayings were made between May 29 and August 8, at approximately two-week intervals, and it may be stated that the scab fungus on the nuts was effectively controlled also, only a few imperfect nuts being harvested from the unsprayed tree, while good crops of well-developed and well-filled nuts were obtained from those sprayed.

By September the brown leaf-spot disease caused serious defoliation in this orchard on the unsprayed trees, but the sprayed trees retained their green, normal, healthy appearance until killed by frost late in November.

It has been noted in a previous



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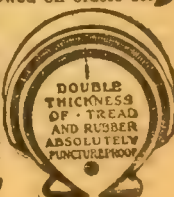
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Dept.



publication from the Department of Agriculture that this trouble was effectively controlled by three sprayings with Bordeaux mixture.

Inasmuch as the necessity for regularly spraying pecan orchards for fungus diseases has not yet arisen, growers should realize that spraying is a preventative only and effective only in so far as the plant is thoroughly covered with the spray material. Inasmuch as infection periods in the Gulf States usually extend and vary greatly with the seasonal conditions, the only safe rule that can be followed is to keep the plant well coated with the spray during the infection period. The number of sprayings necessary to do this will vary greatly with the seasonal conditions and must be adapted to them.

Nursery-Leaf Blight

The nursery-leaf blight of pecans, caused by *Phyllosticta caryat*, confines itself to seedling nursery stock and is readily controlled by three to five sprayings with Bordeaux mixture. The cause and control are so well understood by nurserymen that no further discussion of this trouble is necessary here.

There is still another sort of pecan leaf-blight of common occurrence in certain seasons in the orchards of southern Louisiana and adjacent territory which causes premature defoliation in late summer. Our studies to date indicate that this trouble is not due to a parasitic organism, but falls in that class known as physiological diseases and is due to some unfavorable factor or factors in the environment of the plants. The indications at present point to its being associated with the plant's supply of water, but further studies will have to be conducted before clear statements can be made in this connection.

Die-Back

A condition which can well be described as die-back is of occasional occurrence and can well be noted in a in a paper of this sort.

The trouble has only been observed on old seedling trees at one point in Louisiana and one in Georgia. The limbs died back from the tips slowly through the summer. The dead branches show no evidence there any malformation of the leaves or other symptoms that showed any relation to rosette.

The condition is apparently due to adverse soil and seasonal conditions and cannot be considered serious.

Black Pit

A hitherto undescribed disease of the pecan is known as black pit. This trouble first makes its appearance when the nuts are about half grown. Sunken, glossy, black spots appear on the husk and these gradually enlarge until the entire nut becomes blackened and falls from the trees. If the immature nut is opened when the spots first appear, the internal tissues are found to be blackened in streaks and bands, apparently indicating that the disease originates inside of the nut and that the external spots are but a symptom of the breaking down of the inside tissues.

Repeated attempts have been made to isolate a parasitic organism from nuts affected in this way, but without success, and the conclusion seems to be forced that it is of non-parasitic origin.

Nuts affected in this way can be found during the first half of the growing season from Louisiana to Florida and usually only one or two of a cluster of nuts are affected. It does not appear to spread and is not a serious factor.

The name black pit is proposed as being descriptive of the most characteristic feature of this disease.

Every nut nurseryman and orchard development company should boom their business by judicious advertising. The Nut-Grower is the logical and effective medium for such concerns. The firms which merit public confidence are the ones who are allowed space in our columns.

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.—Advt.

FOR SALE

A Pecan and Satsuma Orchard and Nursery at a bargain. If you have \$4,000.00 write to **AUG. EDWARDS, Lucedale, Miss** 5-3

For Sale—45 acre Budded Pecan Orchard, 3 and 4 years old; Budded Pecan trees and Bud-wood; also improved Farms. C. W. Ransom, Houston, Tex. 8-4

For Sale—25 acres 25 miles south-east of Mobile, 1 1-2 miles to boat landing, 130 acres fenced and cleared. Buildings. 1500 Satsuma oranges, 600 pecans, 500 peach, 125 pears, 175 other trees in orchard in thrifty condition. 5000 trees in nursery. Dry, healthy location. J. S. GAYLORD, Magnolia Springs, Ala.

Budded and Grafted Hardy Northern Nut Trees for northern planting. Write for catalogue. INDIANA NUT NURSERY, J. F. Wilkinson, proprietor, Rockport, Ind. 9-4

For Sale—Four acres, 7 year old pecan orchard, originally purchased from Flint River Pecan Co., Albany, Ga. Will sell at a bargain, and arrange terms to suit purchaser. KARL JORGENSEN, 309 So. Cedar Str., Lansing, Mich. 9-1

WANTED

Price Delivered to L. J. Sharpe, at Commerce, Ga., 500 each of budded and seedling pecan trees, 2 to 3 inches in diameter at the ground. Give height of rough bark.

Wanted—Offer for one hundred seven year pecan trees, five acre grove near administration building, Saxonia Plantation, Tallahassee, Fla. G. C. ATKINS, Maplewood, N. J.

Southern Growers with nuts for sale will do well to submit samples with prices on round lots to QUINBY-STEWART CO., Jacksonville, Fla.

Wish to Borrow \$1,000 on 20 acre pecan grove. Cost \$4.00 when set out five years ago. A fine grove. G. T. COWGILL, Waterloo, Ia. 9-2

Budded Pecans

PRICES REASONABLE. FINE PEACH TREES 8 CENTS. KEIFFER PEARS 10 CENTS. GET CATALOGUE.

**HARTWELL NURSERIES
HARTWELL, GA.**

In writing to advertisers be sure to mention The Nut-Grower. This helps the advertiser, the prospective purchaser, the publication and the industry.

Jefferson County Pecan and Live Stock Company

Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.

L. Majewski, Gen. Mgr.

SAFETY FIRST

Should be applied in purchasing nursery stock and we warn prospective planters to

BEWARE

of the small, back-yard concern that, on account of prevailing conditions, is offering inferior stock at low prices. In the end this is a poor investment.

A QUARTER OF A CENTURY

we have been in the nursery business and hope to remain in it another like period, therefore we safeguard our reputation by supplying our customers only with dependable stock.

OUR PRICES ARE REASONABLE

on high-grade PECANS, CITRUS, PEACHES, PLUMS, FIGS, GRAPES, ROSES, ORNAMENTALS, etc. Write for prices to

SUMMIT NURSERIES

DEPARTMENT 50

MONTICELLO, FLA.

PECAN SLOGAN CONTEST

Early in the year our Pecan Slogan Contest was opened and subscribers were asked to send in suggestions.

A fair number of slogans have

been sent us and are now listed below as subjects for the voting. Each patron of The Nut-Grower is invited to indicate his preference and report same so we can tabulate the replies.

In a later issue we expect to give the result of the voting, as well as publish the names of the authors of the slogans listed.

Voters are asked to indicate their second choice.

1. For permanent pleasure and plenteous profits plant pecans.
2. Pecans if you will eat
And less of bread and meat,
A happy life complete,
No doctor's bills to meet.
- 3 To grow pecans produces wealth;
To eat pecans induces health;
- 4 To grow pecans produces wealth;
To eat pecans induces health;
If health and wealth are both desired,
No surer way are both acquired,
5. Pecan—
Earth's
Choicest
Appetizing
Nut.
- 6 Of all the nuts that I might sing
I must pronounce Pecan the king.

Northern Nut Tree Nursery for Sale

We offer for sale, half or whole interest in northern nut tree nursery containing about 30,000 choice, hardy pecan stocks and 12,000 hardy black walnut stocks, all of right size for budding and grafting next spring. Also propagating wood from 150 English walnut 250 and pecan trees, from two to five years old, for budding and grafting this stock. Varieties: Indiana, Buseron, Major, Hinton, Greenriver, Stuart, Moneymaker and a few trees from buds this season of Posey, Niblack and Butterick pecans.

This nursery is located in Virginia, near freight and express office, convenient to two large cities and in a section where pecan growing is successful. Present owner could lend co-operation in propagating and selling if desired.

The nursery also contains some Biota Aurea Nana, Barberry and Privet.

A man with experience in nursery work and with proper references could handle the business with limited capital.

Full particulars will be given interested persons who make requests and furnish references. Address

The Nut-Grower, Waycross, Ga.

The

Williams

Pecan

A Recent Discovery

COMBINES MANY DESIRABLE QUALITIES. IT HAS SIZE, THIN SHELL, AND A PLUMP KERNEL, IS A SPLENDID CRACKER AND HAS AN EXCELLENT FLAVOR.

The tree is a vigorous grower, a regular and abundant bearer and is resistant to disease and insects.

Write for free leaflet giving the story of pedigree and record of bearing as written by the editor of The Nut-Grower.

DR. W. P. WILLIAMS
BLACKSHEAR, GA.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

The Austin Nursery

F. T. Ramsey & Son
AUSTIN, TEX.

NUT CAKE FOR FEED STUFFS IN ENGLAND

A correspondent of the Yorkshire (England) Post comments upon the statement that the United Kingdom has made a mistake in neglecting the palm kernel, raised principally in British tropical possessions, and says there are also other products of British possessions which foreign nations have been permitted to exploit to their own advantage. The writer mentions the cocoanut, which comes from a part of the Empire, and the peanut, obtained chiefly from India and Ceylon. The fact is cited that the nut-crushing industry has grown to immense proportions on the Continent, while it has not been properly developed in Great Britain. The oil is an important factor in the manufacture of margarine and the by-products, worked up into food cakes, are extensively used for farm animals in some countries, particularly palm-kernel cake, which is highly regarded for dairy cows.—Commerce Reports.

AVERAGE YIELD ESTIMATES

Theo Bechtel, in his annual Pecan Pointers gives his views as to what should be the average yield of trees at different ages as follows:

	Per Tree
6 Years	4 lbs.
7 Years	10 lbs.
8 Years	15 lbs.
9 Years	20 lbs.
10 Years	25 lbs.
11 Years	35 lbs.
12 Years	45 lbs.
13 Years	55 lbs.
14 Years	65 lbs.
15 Years	80 lbs.
20 Years	125 lbs.
25 Years	150 to 300 lbs.

PREVENTING WORMY CHESTNUTS

Worminess in chestnuts can be avoided in large measure, say entomologists of the United States Department of Agriculture, if the nuts when gathered are promptly fumigated with carbon bisulphid, all trace of which should be removed after fumigation by exposing the nuts to the air. They may also be treated successfully with hot water, or subjected to dry heat in an oven or kiln. These measures destroy minute eggs and young grubs, unobjectionable on

ROOD PECAN GROVES

Albany, Ga.

Pecan Trees, Pecan Nuts, English Walnut Trees

Write for Prices . . .

C. M. Rood, President

BUDDED AND GRAFTED ENGLISH WALNUT

and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES

THE NUT SPECIALIST
Lancaster, Pa.

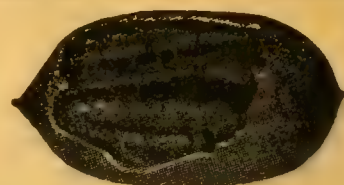
Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

Ocean Springs :: Mississippi



The Pecan Business

In a concise booklet—FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.

B. W. STONE :: Thomasville, Ga.

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

The Fruit-Grower

The National Fruit Magazine

10 Trial Issues 10c

THE ONLY TWICE-A-MONTH FARM PAPER
DEVOTED EXCLUSIVELY TO THE INTER-
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Authentic crop and market reports in the interest of the GROWER. Our winter editions have comprised from 50 to 100 pages, brimful of interesting articles on all phases of fruit-growing, gardening, poultry, the farm home, etc. Handsomely illustrated.

Accept this **GREAT TRIAL OFFER** at once, and we will tell you how you may secure our 300-page illustrated book on fruit-growing, free of charge. Send only 10c, coin or stamps, at our risk. Address

THE FRUIT-GROWER

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Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

Catalogue for the asking

P. J. Berckmans Co.,
FRUITLAND NURSERIES
Augusta, Ga.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

Send 25c and the names of three fruit growers and you will get a trial 12 months subscription to the **AMERICAN FRUIT-GROWER** at one half the regular price of 50c.

A monthly publication devoted to fruit growing, edited by practical orchardist and published in the heart of the Appalachian fruit belt.

Try this Practical, Helpful
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AMERICAN FRUIT-GROWER
CHARLOTTESVILLE, VA.

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NURSEYMAN

Putney, Ga.

Everything Suited to the South

WHOLESALE
GROWERS OF

**GRAFTED AND
BUDED
PECAN TREES**

**SIMPSON
Nursery Co.**

Monticello, Fla.



The May Nut Cracker

The only dependable and successful cracker manufactured. Easy to operate, rapid and lasting. Postpaid anywhere in U. S. on receipt of \$1. Address **F. B. MAY**, Patentee
Wharton, Tex.

the whole, but which may later develop into worms and ruin the nuts. In any case, however, nuts should be carefully examined and defective ones sorted out as completely as possible.

Such treatment is especially important to those who ship nuts in interstate commerce, as such shipments, if wormy, fall foul of the Food and Drugs Act, which defines a food product to be adulterated if it consists in whole or in part of a filthy, decomposed or putrid animal or vegetable substance. In past seasons several consignments of moldy and wormy chestnuts have been seized on recommendation of the Department of Agriculture. Shippers would do well, therefore, to employ the measures recommended by the entomologists, because the eggs and minute grubs, unless destroyed before shipment, may develop in transit and thus ruin nuts apparently in sound condition when shipped.

To fumigate, the nuts are placed in a tight box or barrel and bisulphid of carbon at the rate of one ounce, liquid measure, to a bushel of chestnuts is poured into a saucer resting on top of the nuts. The heavy fumes of the chemical sink through the nuts and destroy the minute grubs as well as larger worms. After fumigation from 12 to 24 hours, the nuts are exposed to the open air, when the very nupleasant odor of the gas quickly passes off. Carbon bisulphid, however, is highly inflammable and should not be used anywhere near fire. Even a cigar spark will set it off.

Fumigation should never be performed in a tightly closed room or in a dwelling, as the nauseating fumes under such conditions might make the operator ill and if breathed in any great quantity might be poisonous. In using carbon bisulphid under any conditions, care should be taken to breathe as little of the fumes as possible. When the nuts have been thoroughly treated, the operator should dump them from the barrel and spread them out where there is free circulation of air, in from the barrel.

Where large quantities of chestnuts are handled, a battery of barrels can be set up in a shed or where there is other protection from storm and wind. If fumigation is started in the late afternoon, the nuts should be effectively treated by morning. Users would do well to observe the effect on the worms and increase

the amount of bisulphid if found necessary.

NUT RECIPES

NUT CROQUETTES—Put half a small onion, cut very fine, in a saucepan on the stove. Add a tablespoon each of butter and flour and let all cook together very slowly until the onion is tender and the flour just beginning to take color. Then add a cup of hot mashed potatoes (do not put milk with the mashed potato); a cup and a half of chopped peanuts, a few grains each of grated nutmeg and white pepper and a teaspoon of chopped parsley. Stir over a slow fire until the mixture is very hot. Then tip it out on an oiled platter and put aside until cool enough to handle. Form into croquettes. Dip each in flour, then into flour batter and then into fine, dry, white bread crumbs. Smooth with the blade of a large knife. Put aside until ready to use.

When about to cook the croquettes, have on the stove a wide frying pan containing about half an inch of frying medium. When hot enough to emit a thin, bluish vapor, put the croquettes in one at a time, using a large fork or the cake turner. Immediately begin to turn the croquettes over to get them browned evenly. When browned, take from the pan and put in a paper-lined pan. Put this pan in the open oven so that the croquettes will be kept hot while the rest are being fried. When all are fried, arrange them on a hot platter and send to the table with a bowl of tomato sauce.

To make the sauce, put half a can of tomatoes in a saucepan on the stove, with half a shredded onion, one clove, one bay leaf and a few leaves of thyme. Let boil slowly, thickening with what remains of the batter in which the croquettes were dipped to bread. Then rub all through a fine sieve and use as directed.

To make the batter, put three tablespoons of sifted flour in a small bowl and gradually add to it a cup of tepid water.

NUT FILLED POTATOES—Bake until soft and mealy six good-sized potatoes. Cut in halves when they are done, and with a sharp spoon remove the pulp, turning into a warm mixing bowl; mash thoroughly; add a tablepan of rich milk or cream; salt and pepper to taste; one tablespoon melted butter, spk.

THE NUT-GROWER

Established by G. M. Bacon 1889

Incorporated 1903

Most desirable Standard Varieties only

Budded and Grafted

PECAN TREES

Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

Send for new catalog and price list

The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

15,000 PECAN TREES

In desirable grades and standard varieties.
Healthy, well-grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. LOTT COMPANY

Waycross, Ga.

Budded and Grafted PECAN TREES

HEALTHY, WELL-GROWN NURSERY STOCK. STANDARD VARIETIES FOR SALE. REASONABLE PRICES. WRITE FOR PRICE LIST

Poland Plantation Nurseries

Monticello, Fla.

Ocean Springs Pecan Nursery

Season 1916-17

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.



Fine
Pecan
Trees



And Fine Orchards
Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries C.M. Griffing & Company
Macclenny, Florida

Pecan Trees

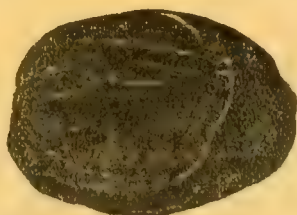
Satsuma Oranges

—AND—
Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
Box 21. Macclenny, Fla.

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

poultry seasonings and a small cup of nuts that have been passed through the meat chopper. Beat with a fork until light and return to the shells, after dusting with browned bread crumbs, and place in a hot oven for ten minutes to crisp and brown.

NUT AND CELERY SALAD—

Mix equal parts of English walnuts or pecan meats cut in pieces and celery cut in small pieces. Marinate with French dressing, and serve with shredded lettuce.

BOOKS AND CATALOGS

Budded Pecan Trees, Magnolia Nursery, Orchard and Farm, Cairo, Ga., W. C. Jones, Proprietor. Price List for 1916-17.

Florida Nurseries: Directions for the planting and care of Pecan and Citrus fruit trees. W. W. Bassett, Monticello, Fla.

Shrubs and Evergreens; supplemental list of the Austin Nursery, Austin, Tex. Eight finely illustrated pages.

Plant a Pecan Orchard; card notice and price list of trees and orchard offerings. H. O. Hyatt, Kinston, N. C.

A Promising Pecan; a six page folder descriptive of the new introduction by Dr. W. P. Williams, Blackshear, Ga.

The Austin Nursery; catalogue of special interest in general nursery and landscape lines. F. T. Ramsey & Son, Austin, Tex.

Be Thrifty: Use Common Sense; a four-page leaflet advocating the plating of pecans. Sent on application to H. O. Hyatt, Kinston, N. C.

A Good Record; circular letter showing results obtained from Frotscher trees. Sent on request. J. B. Wight, Cairo, Ga.

Hardy Nut Trees for 1917; a fine trade catalog with much interesting information; 24 illustrated pages; J. F. Jones, Nut Tree Specialist, Lancaster, Pa.

Fruitland Nurseries; 1916-17 Catalog; 65 finely illustrated pages with prices of fruit trees and ornamental shrubbery. P. J. Berckmans Co., Augusta, Ga.

The Pecan—What of It? A reprint from The Nut-Grower; fifth edition; a six page folder. This reprint has broken all previous records in point of circulation. The Nut-Grower Co., Waycross, Ga.

BULLARD PECAN NURSERIES AND ORCHARD

Leading Varieties, True to Name

AN EXPERT OPINION

May 22, 1916.

Mr. Wm. P. Bullard,
Albany, Ga.

Dear Sir:

Replying to your inquiry as to my opinion of your pecan nursery stock will say that I have planted several thousand of them in different seasons and do not hesitate to say that they were the best pecan trees that I ever had experience with.

I have worked continuously in the pecan business for the past fifteen years in Georgia and Florida and for the past seven years have had charge of the field work of a 950 acre pecan orchard near Albany. I have planted trees from most of the prominent nurseries grown in the states of Georgia, Florida, Mississippi, Louisiana, Texas and Alabama; in fact, during my pecan experience I have planted from 50,000 to 60,000 of these trees and therefore think I am well qualified to express an opinion on the merits of a pecan tree.

For several years past I have been familiar with your methods of growing, digging and handling of nursery stock and do not hesitate to state over my signature that I prefer your trees over those of any I ever planted or ever saw planted.

E. H. CHESTER.

Prices and Literature on Request
Wm. P. Bullard, Albany, Ga.

The Nut-Grower

Volume XV

October 1916

Number 10



MANHOOD begins when we have, in any way, made truce with Necessity; begins even when we have surrendered to necessity, as the most part only do; but begins joyfully and hopefully only when we have reconciled ourselves to Necessity, and thus, in reality, triumphed over it, and felt that in Necessity we are free.

—THOMAS CARLYLE

10c per Copy

\$1.00 per Year

Pecan Trees

BUDDED PAPER SHELLS
BEST VARIETIES

Expert Propagation. ::: Healthy and
Hardy Stock

WRITE FOR PRICES

T. H. PARKER
MOULTRIE, GA.

15,000 Pounds Pecans

We expect to have for sale 15,000 pounds of the highest grade, standard size and weight pecans, as follows:

Schley.....	8,000 lbs.
Stuart.....	3,000 lbs.
Van Deman.....	2,500 lbs.
Frotscher.....	2,000 lbs.

WE WILL SELL IN
BULK THE WHOLE
CROP, OR OTHER-
WISE

Deliveries October 15th and
January 15th.

KEYSTONE
Pecan Orchard Co.

Groves: Baconton, Ga.
Offices: Florence, S. C.
JAS. D. EVANS, President

COLLEGE PLANTS NUT TREES

A plantation of nut bearing trees has been made by the State College of Forestry at the Chittenango Forest Station, 20 miles east of Syracuse, N. Y. The results of the plantation show that many species of nut trees will thrive in Central New York. Small English walnut trees have withstood the severe drouth of the past summer and have made remarkable height growth. The English filbert, which is being tested in comparison with the native hazel, has also made good growth and doubtless will prove valuable for general planting, especially where hedges and low-growing wind-breaks are desired which at the same time will give fair returns in edible nuts. Some of the improved chestnuts have grown fairly well, but on account of the danger of the chestnut blight these species do not seem to have a good future in Central New York.

Mr. H. W. Whitbeck, of Blackshear, Ga., exhibited at the Pierce county, fair in 1916 a jar of fine specimens of Stuart and Delmas pecans from trees planted in 1913. The nuts of both varieties were well above the average in size and appearance.

The W. B. Dukes
Pecan Farm
Moultrie, Georgia

Growers and
Shippers of

**FANCY PAPER
SHELL PECANS**

One million grafts and buds of Schley Stuart, Delmas and Moneymaker. Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

VOLUME XV

WAYCROSS, GA., OCTOBER 1916

NUMBER 10

WHO, WHY AND HOW OF PECAN INVESTMENTS

ANY investment proposition in the hands of thoughtful people is subjected to a more or less thorough and extended examination. In the pecan line only a few years ago the lack of reliable data enabled many large operators to enlist capital and sell orchards on the strength of expectations, rather than on demonstrated commercial operations, which at that time were not available. While there was ample grounds for the expectation, based upon well accredited but isolated estimates and a few records, still the working out of these propositions in actual orchards was attended with various difficulties which required perseverance, experience, integrity and money. Where these essential requirements were combined with good business management and the location proved to be suitable, the success has been pronounced, with anticipations pointing to even greater achievements than the early and irresponsible booster claimed. At the same time the fact remains that the absence of any one or more of the essential requirements above-mentioned militates more or less seriously against every endeavor and too frequently results in actual loss. With success in the orchard development other problems are encountered, but these are simple business features of the industry, such as selling the nut products to best advantage or selling orchards at any period of development, as well as handling skillfully such by-products as the orchard will produce without detriment to the permanent value of the investment.

With this preliminary statement we can take up the several interrogations which head this article, not necessarily in the order in which they appear, but rather in the logical order in which they may be studied. This places the "Why" at the head of our list. So much has already been said on this feature of our discussion, and in the main truthfully, that a simple brief summary will suffice for present purposes. Pecans, while now regarded as a luxury, and available to a comparatively few people, are in reality a natural food product, highly condensed, hermetically sealed and always ready for use, regardless of the contingencies incident to the preparation and cooking of food. Sooner or later they will be a staple and universal food product, and this time will come just as soon as the commercial price of nuts will put them in competition with other products that are now in use. When it is cheaper to use nuts than meat the consumption of pecans will be enormously increased and will become permanent. This eliminates any apprehension as to over-production, as the actual cost of producing pecans is so small after the trees are well established that a small part of the present selling price will furnish a fair margin of profit. This, then, makes a safe, profitable and permanent investment. When once you are the possessor of a bearing orchard of choice and abundant bearing varieties, you can complacently face the specter

that reminds one of possible want in the evening of life.

"Who should plant pecans?" can be passed with a simple list, without taking time to show the many reasons why they are singled out, aside from the fact that they can to advantage make use of the opportunities the industry affords.

The Southern farmer, where land and climate are eminently suited to pecans, can most conveniently profit by planting orchards. Aside from the necessary trees and suitable instructions how to plant and care for them, the farmer has every advantage. His land, equipment, and labor all contribute to the investment and at the same time, during the early years of the orchard, the land is available for common farm uses, with no detriment to the trees. The next class on the list is made up of various persons, regardless of locality, who can buy a southern farm, with a view to planting an orchard and incidentally making a living from the land in a peculiarly genial and healthful climate, while awaiting the profitable bearing of trees, which takes place along about the seventh or eighth year if varieties and cultivation have been given proper attention.

Others may not be able to buy a suitable farm, and even if they could would not be in a position to cope with the problems and labor of farm life. They would be obliged to depend on hired labor which, while practicable, is attended with various difficulties.

To overcome this difficulty, the widely exploited method of handling orchard interests by contract came into vogue, which soon merged into the sub-division of large areas into small tracts which were planted and sold to non-resident investors, with agreements to care for the property for five or more years, all of which was included in the purchase price of the tract. This makes a very attractive proposition when shown up by the promoter, and ordinarily, if properly and honestly handled, is well worth the price paid. The trouble comes when the contract expires. An investor living in a northern city, with a five acre pecan orchard in Texas or some other southern state, has a perplexing and expensive proposition on his hands, and the best he can do is to pool his interests with others similarly situated and sacrifice an indefinite but substantial portion of his anticipated profits.

Others who would like to have pecan interests, can afford only small amounts at stated times for investments. At present there is no safe way for them to place their savings in orchard property where it would be safe and enhance in value.

How to obviate the difficulties mentioned and at the same time make the investor secure, as well as to make the investment available for the party who has one hundred dollars or for another with many times that amount, is the task for someone to undertake. If every-

body was honest; if everybody was competent to perform what he is willing to undertake; if everyone could have a square deal, the joint stock company would be ideal for handling pecan investments. Very few people, however, are now willing to invest in such an organization, where their relative holdings would be small.

It seems to the writer that the application of established business principles in pecan developments and operations are just as available as in other industries. To illustrate, say that a fund of \$10,000 more or less that has been assembled for investment in a public building. This capital is in the hands of a trustee who has agreed to handle it to the best of his ability for the benefit of the various persons contributing. The first step the trustee would take would be to employ a competent and reliable architect to whom he would give instructions to secure a suitable location and then make plans and estimates how best to use the funds at command. These plans and figures which provide for a finished structure at a cost within the available funds, are approved by the trustee and the architect proceeds to materialize the plan. In due time the building is erected according to the plans adopted and the property becomes a stable source of revenue, just as it is skillfully handled by the agent to whom it is committed. The trustee then regularly apportions the net returns among the contributors to the fund.

If a pecan investment is desired, the trustee simply employs a reliable and competent pecan horticulturist, who handles the orchard development in the same practical way that the architect constructed the building. The horticulturist stays on the job longer, as his work is not done until the orchard becomes self-supporting, when a competent and honest caretaker succeeds to the management, but still subject to the advice and under the direction of the horticulturist.

There is no reason why this method of handling pecan investments should not be eminently successful and profitable. It makes the attractions of the pecan available for anyone, regardless of whether they live in the pecan belt or not. It leaves them free-handed for following their regular occupation without worry, responsibility or danger, which would attend a personal investment in the same industry. It economizes in the cost of development and saves overhead expenses. It brings to bear all the available and up-to-date measures in handling the property and cuts out the unnecessary expenses and obviates the expensive losses the individual often incurs in gaining experience and skill which the horticulturist furnishes at nominal cost.

However, good and satisfactory as this method is, the real problem just at this time is to secure the competent and reliable pecan horticulturist. The business is new and the eligible men who have been educated in the school of experience, with such help as the National Nut Growers Association and The Nut-Grower have been able to render them, are all in successful business for themselves and are not to any great extent available for professional work of this kind. Then there has been, thus far, no particular demand for this profession, as the promoter has preempted the field, and where he has not been doing business the pecan nurseryman has been generous with advice and information which made a market for his trees. Under such circumstances, the professional horticulturist has not been available to any marked extent. This condition is also favored by the popular sentiment that it is an easy matter to grow

pecans and that expert direction is not necessary.


Thus the desirability of pecan investments becomes a matter of careful investigation. This proving satisfactory, as it surely will when reliable information is assembled, the next step is to assemble the funds or prospective capital. Then the arranging for the proper administration of the business by a trustee or some financial agent of acknowledged stability. This agency, in concert with a chosen representative of the contributors to the fund, employs a horticulturist, who in turn submits plans and specifications showing a definite proposition that he can work out with the proposed capital. His plans being approved by the trustee and the representative of the investors, a contract is made with the horticulturist or the construction company which is an adjunct to his operations, and payments made from time to time as the work actually progresses up to the completion of the work when the orchard is properly established. This will ordinarily require five years' time, and the distribution of the funds is made to cover all the necessary operations during this or a longer period, until the returns are sufficient to meet further expense. The distribution of the capital would require about 50 per cent of the estimated cost of the orchard during the first year; 15 per cent the second year; 10 per cent the third and fourth years and 5 per cent the fifth, sixth and seventh years. This contemplates that the selected orchard site is fully paid for before any work is done on the property.

The assembling of the capital is gauged on the same schedule, so that any subscriber can readily assume double the amount of his initial investment. The entire policy is to be safe all the time, to always have funds as they are needed and to make everything count for the best possible results.

In formulating this program several cardinal considerations were kept in view. First it was established that the capital as used should always have its full equivalent value in the property purchased and improved. Second, that no fixed charges which would be a drain on the capital would be allowed, and that contracts and authorized commissions should take care of all necessary expenditures. Third, that permanent and substantial profits were to be obtained only by the character and thoroughness of the orchard development.

NEGLECTED HORTICULTURE

By E. W. KIRKPATRICK

O RICHER field for wealth seeking can be found than that of horticulture—rich in a wealth of health, pleasure and profit—yet no resource is more neglected.

In this short space we can mention comparatively few, and only in a general way of the numerous opportunities that invite our acceptance.

All Southern soils are adapted to the profitable growth of a large variety of useful trees and plant which produce fruits of rare value and which are indispensable to our well-being. Fruits and flowers in unending variety and great value can be obtained by little or no outlay of cash. The requirement is only a little industry, fascinating employment.

Those who refuse to invest in best commercial trees and plants can often secure seeds, scions and rooted cuttings from those who grow a surplus. Women's Civic improvement clubs, in their long list of benevolent work, include that of free distribution of seeds and

plants to those who will plant and cultivate, than which there is no nobler nor more generous work. It is helping those who help themselves—charity of Providence, the only valuable kind.

The peach is the queen among nature's delicacies and will grow quickly everywhere. The plum, grape, berry and nut in endless variety can be inexpensively grown in all sections of this country, and we find not one home in one hundred has a supply of these rich offerings. These are not only luxuries: they are necessities to the health and happiness of mankind.

There is no other method through which the value of a home can be increased more cheaply and rapidly than that of planting fruits, flowers, shade, evergreen and nut trees. Fine pecan trees growing near Southern homes are so highly valued they could not be removed for the offer of several hundred dollars each. And yet we see few palatial homes where the prince of the forest has been adapted. This is inexcusable neglect.

No other time in American history has equalled this in offering opportunity for the profitable sale of surplus products of garden and orchard. We have quick and comparatively cheap access to the world's best markets. The telephone, motor vehicles, parcels post, rural banks and government market bureau offers us opportunities which have never before been realized. It is our part to prepare the soil, plant and cultivate, and ship to the market, receiving in return great accumulation of wealth.

THE CHICAGO NUT CRACKING INDUSTRY

THROUGH a persistent clean-up campaign conducted by the Illinois Food Department, the nut meat industry in Chicago has undergone an evolution in the last few months, and the public can now buy the shelled product with the certainty that the meats have been extracted in clean shops where sanitary regulations under state supervision prevail. The elimination of the sweatshop system and its attendant evils, has contributed more than anything else to this beneficial result.

Almost the entire output of nut meats in Chicago today is supplied by factories where the cracking, picking and handling is done by a force of workers under the supervision of a foreman or forelady. Girls engaged in the operation wear white caps and aprons and the enamelled benches where they work are kept scrupulously clean. The nuts are cracked by machinery.

This is in contrast with general conditions as they existed less than a year ago, when a great deal of the work was farmed out and operations were carried on in ill-ventilated tenements and darkened cellars. Under the old system, nuts were picked over in the homes of the workers, where sanitary conditions were often extremely bad.

Samples obtained from some of these tenement districts, which were analysed in the laboratories of the State Food Department, indicated an urgent need for reform. Investigations disclosed many instances where children were kept out of school to do the work.

The reforms are principally due to a system of education and co-operation whereby results were obtained without recourse to the courts. About fifty hearings have been held in the Food Department offices in the Manhattan building, to which violators of the food and

sanitary laws, as relating to the nut meat industry, have been summoned; but no fines have been imposed.

Last February, after a conference with the owners of two or three of the leading nut factories, which were already being conducted according to high standards, Commissioner W. Scott Matthews of the Illinois Food Department, decided to begin a movement for the betterment of the industry in its entirety, and to put a stop to the practice of farming out the work.

John B. Newman, Assistant Food Commissioner, was given active charge of this campaign. Notices for a conference to be held at the Food Department offices were sent to all branches of the trade, including dealers, manufacturers, importers, brokers and representatives of the big wholesale grocery houses.

Hostility on the part of some of the nut factory owners to the proposed measures developed at this meeting. These men complained that the additional expense of re-equipping their places and making necessary alterations would bankrupt them. Labor, they argued, would be almost unobtainable, as the women and girls upon whom they depended could not be induced to leave their housework for the longer periods of time necessitated by the factory system. Mr. Newman was told that he would be depriving a worthy class of their means of livelihood.

The owners of factories where proper conditions prevailed, were then called upon for opinions. By installing improving and introducing proper sanitary methods, they declared that they had put their business on a better basis and had been rewarded by increased patronage as a result.

This was followed by a proposition from the buyers representing the biggest wholesale grocery houses in Chicago, that carried the day. In order that the higher standards might apply equally to the business as a whole, they gave their assurance that they would buy only from factories where cleanliness and correct sanitary methods were observed.

Following this conference, inspectors from the Food Department were detailed to keep a close watch on the situation. For a time, nuts were smuggled at night to some extent, into the tenement houses in the Italian districts. As soon as such cases were detected, the violators, including the dealer and pickers, were summoned to hearings held at the Food Department.

By degrees the proprietors of factories who had objected at first to the proposed change in methods, adopted a favorable attitude. It was found that the women and girls did better work away from their homes. They also benefited because the work was systematized and they were enabled to obtain steadier and more remunerative employment.

A visit to one of the factories in South Water Street furnishes a good example of the progress that has been made. The pickers are seated on opposite sides of white enameled benches and just above their heads are conveyors leading to chutes down which the nuts, broken and ready to be picked, are dropped.

Each girl wears a white cap and apron. The different races are separated. Italian girls are in one group; Polish girls in another. Hats and wraps are kept in lockers. Wash bowls and running water are accessible.

Chicago leads all other cities in the country in the salting of nut meats. The value of this product handled there annually amounts to about three million dol-

(Continued on next page.)

The Nut-Grower

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One of the compensations for the scarcity of potash as a commercial fertilizer is the better recognition of the value of ground limestone, which is performing wonders as an indirect fertilizer, especially in regions where acid soils abound. It does not matter much whether this product is a distinct fertilizer or not since it serves a purpose in increasing crop yields.

Some general principles apply to the successful operation of a pecan orchard which are recognized as being essential to success in commercial and industrial lines as well as in professional pursuits. The right man in the right place and right methods make a combination that will certainly produce good results when backed up by industry and fortified by perseverance.

Many of the tragedies in business might be avoided by a more careful selection of a vocation. There are too many misfits in the business and professional world. Not only is a suitable selection of a calling necessary, but thorough preparation is essential to permanent success. It is our business as well as our pleasure to help our patrons to success in the lines which this publication represents.

With all the increase in nut production in the lower South, it seems that only a small beginning has been made when we compare the home production with the large and constantly increasing importations from various foreign countries. Those who neglect to plant nut trees through fear of over-production can well afford to base their apprehensions on a more substantial foundation as long as our imports are three to four times the amount of our home production.

We contemplate giving special attention to the hickory nut in some of the early issues of 1917. Correspondents and subscribers are invited to send experiences and information bearing on this subject. There is a great field for original work in bringing the hickory into the prominence it deserves. Lines that have been followed

in the case of the pecan are suggestive, although the wider extent of territory in which the hickory is found with varying conditions of soil and climate may make experiments laborious and tedious. Though this be true, the trouble taken would be well worth while.

As time passes we see many illustrations of the benefits to be derived from judicious advertising. While we have loyal and generous patrons whose support has contributed to the advancement of the industry, we recognize even greater possibilities for the future and are inclined to convert the possibilities into actualities by being more aggressive in building up circulation and in working systematically for a larger advertising patronage than in former years. Our policy will be to convert the leaners into lifters. It is not a square deal for a comparative few to bear all the burdens of pecan progress.

Several things happened rather unexpectedly or came about naturally in marketing the 1916 pecan crop. In the first place, the crop was fully 50 per cent short, while the demand has been regularly increasing for a number of years. Then the shrewd speculator and dealers got busy early in the season and bought up in various centers a large portion of the crop while it was still growing on the trees. This may or may not have interfered with the operations of the Pecan Exchange this season. It seems that the entire crop was cleaned up quickly, and while the prices obtained were presumably satisfactory, it remains to be seen how profitable the season was to the speculator, as the consumer did not recognize any reduction in price and was unable to obtain the quantity and quality of pecans desired.

THE CHICAGO NUT CRACKING INDUSTRY

Continued from last page.

lars. Spanish peanuts, Jumbo peanuts, almonds, pecans and walnuts are the most important varieties included in the salting and blanching operations.

Chicago is also a leading center in the nut picking industry. One factory on the North Side occupies five floors of a well-equipped building and employs over 300 hands. Seventy-five girls are occupied in extracting pecan meats exclusively. An equal number are in the packing department, while salting and blanching is another important part of the business.

An Italian woman in the same district is the proprietor of another place. She personally attends to all her buying and maintains active supervision over the factory. She has invented and perfected a nut-cracking machine which is fed automatically and breaks seven nuts at a time. In the basement is a plant which supplies ammonia for keeping the nuts in cold storage on one of the upper floors.

Nut picking in the factories is conducted under the piece-work system. Wages vary from seven to nine and a half cents per pound. An expert worker can extract twenty-five to thirty pounds of meats a day. Some of the owners complain of the difficulty of obtaining labor. This they ascribe to a decrease in emigration from foreign countries on account of the European war. Others apparently experience no trouble in getting a sufficient working force.

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NUT GROWING A NEW AMERICAN INDUSTRY

Most people who live in cities come to think, if they think about it at all, that the city is the whole thing. The country is well enough for a couple of week's vacation in the summer, or as a source of milk and country sausage, but the city with its hurry and bustle and vast business interests is really the important thing on which all else depends. Nothing of the kind. If the cities were all destroyed and the inhabitants distributed among the farms everybody would get along pretty comfortably. But if the farms were destroyed the great cities of the world would perish in a few days. The farms furnish the food for the cities.

The cities are growing faster than the farms. How are we going to feed the great city populations of the future? Is it to be on the present hand to mouth system of agriculture, with annual crops sown in the spring and reaped in the fall—if the weather is good? A bonanza king if it rains just right, a near bankrupt if the weather and bugs are bad? Or are we going to develop a more stable and permanent system of agriculture in which tree crops shall have a prominent place?

A tree is a permanent thing. It lasts for years or hundreds of years. It doesn't have to be sown or planted every year, and hoed or cared for

like a grain crop or potatoes or beans. Once its great roots go down into the earth it is pretty nearly independent of flood and drouth. Pigs and sheep and cattle can graze under its shade and do it good rather than harm. And if your tree is a "great engine of production," an oak, chestnut, walnut, hickory, fig, pawpaw, mulberry, carob or honey locust, the dropping therefrom will fatten the animals without labor by man.

Nine-tenths of our crops go to nourish our domestic animals and much of our work is waiting on them. If we can manage so that the animals will wait on themselves, and there's nothing that agrees with them better, we shall have more time to play with the children.

Of all the tree crops, nuts are the most important, because they are the richest natural food substance known. A nut is a seed, a result of Nature's supreme effort to pack as much nourishment as she can into the smallest possible place for the nourishment of the future young plant. Compared with the concentrated richness of the nut, the red-checked, juicy pulp of the apple or peach is but a sip of sweetened water, very pleasant to the taste and important in the dietary, but of little value as food.

NUTS AS FOOD

Many nuts, on the other hand, contain much muscle-building food

as rich cheese, a third more than beefsteak, twice as much fat as cheese, five times as much as beefsteak and seven times as much as eggs. Chestnuts contain 70 per cent of starch, nearly as much as the best wheat flour, and four times as much as potatoes. Peanuts and hickory nuts are three times as nourishing as beefsteak. When you think of it that way it hardly seems to be the thing to munch casually triple-extract of beefsteak from a street stand or after a hearty dinner.

The bad reputation for digestibility that nuts have is due to such things. Eaten at the right time, in the right amount and properly chewed, they are as digestible as any food of equal richness.

A fifty-pound bushel of black walnuts costing one dollar yields 12 1-2 pounds of meat whose fuel, or food, value is 37,500 calories. The same number of calories in beefsteak at twenty-five cents a pound would cost over nine dollars. The buyer must crack the nuts and take out the meats himself or have the children do it.

Butternuts are equally cheap and nourishing but the proportion of meat to shell is less. The flavor, however, is more agreeable to most people.

Chestnuts, the large imported kind, when bought in quantity, are a fairly cheap source of starch, but not as cheap as wheat flour.

A bushel of hickory nuts at three dollars yields as many calories as sixteen dollars worth of round steak.

Is not the nut being neglected as a source of cheap food?

Nuts are sanitary when not deprived of their protective covering. They take the place of meat with its possibilities of disease or poisoning. But make this exception, that nut meats passed through unknown hands have lost Nature's sanitary insurance.

This country is still but a healthy growing boy going to school to learn how to manage himself when he is grown up; and, naturally, in nut growing, as in many other things, his teacher is the grown-up old world. Over there they learned, centuries ago, the value of the tree as a food crop producer, and trees furnish the chief food and support of countries the land is one-third or one-half covered with trees growing crops for man and his beasts—figs, olives, acorn, carobs, chestnuts, almonds, walnuts. A man there can go to sleep for six months, have ty-

phoid fever or take a sabbatical year off without losing much on his crops.

In parts of Italy they make their bread of chestnut flour. In Corsica they feed chestnuts to the horses. In Portugal the pigs are entirely fattened on acorns. Farms are valued according to the number of acorn oaks, chestnuts or walnuts. The chief income of many farmers is from walnuts or chestnuts, filberts or almonds, millions of dollars worth of which are exported to us, when we ought to be growing them ourselves.

IMPORTS OF NUTS

Our annual imports are \$15,000,000 in nuts and nut products, in normal times, with an average yearly increase of about a million dollars.

NUT GROWING IN AMERICA

And yet this country is just as good as anybody's country for growing nuts. We have such a diversity of climate that we can grow most of the world's varieties here in America, though it will take us many years to develop over the whole country the permanent system of agriculture, furnished by nuts and other tree crops, which has been built up through centuries in many older countries.

In some parts of this country, however, a splendid beginning has already been made. The walnuts and almonds of California bring even higher prices than the imported, but do not nearly fill our needs. The new pecan grown in our southern states is a wonderful thing. Most people's idea of a "pea can" is a little red nut that lurks in the bottom of the Christmas bowl when all the good nuts have been picked out; a nuisance of a nut that cracks all to pieces and has to be eaten with a hairpin. These are the common wild Texas pecans, worth four or five cents a pound that the dealer mixes in to increase the profits of the mixture that he sells for twenty-five cents a pound.

But there is no better nut in the world than the kind of pecan to which thousands of acres are now being planted in the South and which most people in the North have never even seen.

ORIGIN OF NUT VARIETIES

And how were these splendid nuts obtained? Not by some plant wizard mysteriously evolving them by scientific processes, but simply by putting grafts from the best nut trees of the fields and forests into young trees in the nursery. This does not

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COMBINES MANY DESIRABLE QUALITIES. IT HAS SIZE, THIN SHELL, AND A PLUMP KERNEL, IS A SPLENDID CRACKER AND HAS AN EXCELLENT FLAVOR.

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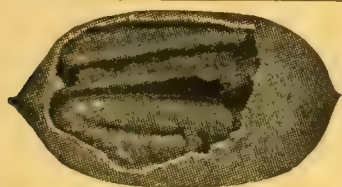
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change the nuts at all. It simply perpetuates them as Nature created them. Each grafted nursery tree bears the same nut that the parent tree bore.

Many people do not know that the only way we can grow any particular kind of fruit that we want is to graft buds from the original tree on other trees of similar kinds in the orchard or nursery. All fruit trees that grow from seeds are new kinds. You can't grow a true Baldwin or Greening apple from seed. You must take the buds from a Baldwin or Greening tree and bud or graft them on another apple tree in nursery or orchard in order to get trees that will bear Baldwin or Greening apples. It is the same way with nut trees. You've got to bud or graft them to get the same nut that grows on the parent tree.

A man planted a thousand nuts from one genius pecan tree. Of the resulting trees no two bore nuts alike nor like those of the parent tree or as good. This is because Nature isn't interested in growing things as man wants them. What she is after is seed and plenty of it. All trees grown from seed tend to revert to the common type that Nature has found most useful for her seed purposes. A genius tree, like a genius man, is a rare accident, and the children of geniuses are rarely geniuses.

We can't graft a human genius. If we could we might now have whole cities of Shakespeares, just as we have whole orchards of the Baldwin apple. But we can graft genius trees and keep the characteristics practically unchanged, perhaps for centuries. So if you know of a genius nut tree it is your privilege and duty to have it perpetuated by grafting.

In the Old World, in California and in the pecan country, they have passed through, or over, the seedling stage. All the trees they now set are grafted. But in the North some of our nurserymen are still in the seedling stage. Some of them must have cut their eye teeth, however, because they know enough to represent their seedling trees as grafted. But it is only the purchaser that is grafted. There is now no excuse for selling or setting seedling nut trees in the North any more than seedling apples or peaches.

A very large proportion of our native nut trees bear poor nuts. It is the exceptional tree that bears good crops every year of large nuts of good quality. These good nut trees

are being lost from natural causes, or by the axe, every year, and are not being replaced. Once gone a good tree is forever lost unless grafted on another tree.

PRODUCTIVE VALUE OF NUT TREES

The productive value of some nut trees is immense. A woman told me in Indiana that she sold \$90 worth of pecans at 15 cents a pound from one wild pecan tree. In 1910 Mr. John West, of Monticello, Fla., sold 900 pounds of nuts from one seedling tree and received a check for \$99 for them. Another pecan tree averaged \$90 a year for seven years in succession. A tree in Cairo, Ga. gave an annual average for three years of \$100. One such tree on an acre would return more money and more food value than all the wheat that could possibly be grown on it, and with hardly any labor. And the wheat can be grown there, just the same, even with three such trees to the acre.

Nut growing is destined to be a great industry and to furnish a substantial part of the food supply of the world in the centuries to come.

Nut trees give us our best timber. The oak, beech, chestnut, hickory, butternut or white walnut, black walnut are among our most valuable woods.

Can anyone say why we do not use for shade trees, avenues and roadside planting, the pecan, hickory, black walnut, chestnut and English walnut? Why plant worthless poplars, soft maples, willows, ailanthus and other trees of little or no use except for shade, when we might have equally or more beautiful shade trees, combined with valuable productiveness? Suppose that our country roads were lined with fruit and nut trees and the products free to all? Would that help solve the problem of food? A few bushels of nuts from your door yard trees, and a knowledge of how to use them in cooking would lighten the burden of the bread and meat winner.

How could a man get more permanent fence posts, never needing renewal or painting, and paying him in fruit for the privilege of working for him, than with a row of nut trees?

Every farmer ought to have nut trees on his place just as he has fruit trees. He ought to have different kinds of nuts, just as he has different kinds of apples, pears, plums and peaches. Moreover, he ought

not to be contented with wild nut trees any more than he is contented with wild apple or plum trees. He can now have improved nuts of all varieties. He can begin by working his native shagbarks and pig-nuts to choice shagbarks or pecans. His native black walnuts and butter-nuts can be changed into English walnut trees.

Everybody who has a place for a tree should set a grafted nut tree. Every owner of a village plot, or even a city backyard, should have a nut tree. Never mind the ailanthus or poplar. Grow a tree that bears something to eat.

An infinite series of nut hybrids awaits the patient and long-lived experimenter. The best prophets predict the world almost living on wonderful new nuts five hundred years from now. Nature herself has already given us hints of the hybrid possibilities, though her chance results miss the mark that man's purposive efforts may be expected to attain.

Nut growing is only a part of a new agriculture by which much of the food of man and his domestic animals shall be grown on trees, independent of many of the limiting conditions of sown crops, but permitting, under suitable conditions, companion cropping with sown or planted crops. It must be built on the idea of permanence and assurance. It must include the ideas of intensive cultivation, of two and three story agriculture and of growing legumes. On our arable land we shall grow nut trees, three or four to the acre, giving them the greatest possible development; between them we shall grow peanuts, beans and alfalfa; we shall keep some chickens, pigs, sheep and a cow and be forever independent of the meat man.

Of our steep, rocky and untillable slopes, millions of acres will be clothed with oaks, chestnuts and beeches, with persimmons, pawpaws, mulberries, honey locusts and sugar maples, binding the soil and conserving rainfall; and beneath them our droves of pigs, flocks of sheep and herds of deer will find shade and water while harvesting their own food.

It is foolish to say, "I am too old to plant trees. Some of our most enthusiastic nut planters are octogenarians or better. Grafted nut trees bear as early or earlier than other fruit trees. The man who plants fruit and nut trees takes out

Jefferson County Pecan and Live Stock Company

Wholesale Growers of

Standard Varieties Grafted and Budded PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.
L. Majewski, Gen. Mgr.

SAFETY FIRST

Should be applied in purchasing nursery stock and we warn prospective planters to

BEWARE

of the small, back-yard concern that, on account of prevailing conditions, is offering inferior stock at low prices. In the end this is a poor investment.

A QUARTER OF A CENTURY

we have been in the nursery business and hope to remain in it another like period, therefore we safeguard our reputation by supplying our customers only with dependable stock.

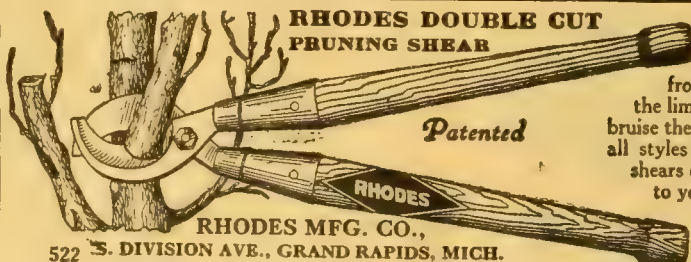
OUR PRICES ARE REASONABLE

on high-grade PECANS, CITRUS, PEACHES, PLUMS, FIGS, GRAPES, ROSES, ORNAMENTALS, etc. Write for prices to

SUMMIT NURSERIES

DEPARTMENT 50

MONTICELLO, FLA.



**RHODES DOUBLE CUT
PRUNING SHEAR**

Patented

RHODES MFG. CO.,
522 S. DIVISION AVE., GRAND RAPIDS, MICH.

THE only
pruner
made that cuts
from both sides of
the limb and does not
bruise the bark. Made in
all styles and sizes. All
shears delivered free
to your door.
Write for
circular and
prices.

a paid-up life insurance policy for himself and his children. And the man who plants trees and cares for them himself will disappoint his anxious heirs and live long to enjoy the fruits of his own planting.

There is hardly a thinking man

or woman to whom there does not sometimes come the old instinct and longing to get back to nature and the land. Youth seeks the competition of life with others in the city, but mature years bring the desire for the peaceful life of the coun-

FOR SALE

Grafting Wood of Stuart, Frotscher, Teche. MRS. M. L. RANDOLPH, Bayou Goula, La., "Blythewood Pecan Grove." 10-6

For Sale—45 acre Budded Pecan Orchard, 3 and 4 years old; Budded Pecan trees and Bud-wood; also improved Farms. C. W. Ransom, Houston, Tex. 8-4

For Sale—220 acres 25 miles southeast of Mobile, 1 1-2 miles to boat landing, 130 acres fenced and cleared. Buildings. 1500 Satsuma oranges, 600 pecans, 500 peach, 125 pears, 175 other trees in orchard in thrifty condition. 5000 trees in nursery. Dry, healthy location. J. S. GAY-LORD, Magnolia Springs, Ala.

Budded and Grafted Hardy Northern Nut Trees for northern planting. Write for catalogue. INDIANA NUT NURSERY, J. F. Wilkinson, proprietor, Rockport, Ind. 9-4

For Sale—Four acres, 7 year old pecan orchard, originally purchased from Flint River Pecan Co., Albany, Ga. Will sell at a bargain, and arrange terms to suit purchaser. KARL JORGENSEN, 309 So. Cedar Str., Lansing, Mich. 9-1

Wish to Borrow \$1,000 on 20 acre pecan grove. Cost \$4,000 when set out five years ago. A fine grove. G. T. COWGILL, Waterloo, Ia. 9-2

Budded Pecans

PRICES REASONABLE. FINE PEACH TREES 8 CENTS. KEIFFER PEARS 10 CENTS. GET CATALOGUE.

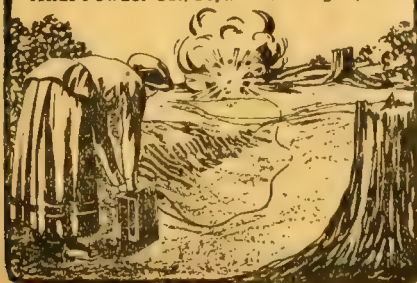
HARTWELL NURSERIES
HARTWELL, GA.

Safe and Easy to Use

By following simple directions anyone can use *The Safest Explosive* without experience or risk. Many women farmers blast stumps, make ditches, prepare tree beds, shatter boulders and break up the subsoil with

Atlas Farm Powder
THE SAFEST EXPLOSIVE
The Original Farm Powder

—made especially for farm use and sold by dealers near you. Free book, "Better Farming," tells how to save time, labor and money. Write for it now.
Atlas Powder Co., Dept. Wilmington, Del.



try. "The boy on the farm dreams of the day when he, can be the president of a bank, have a home in the city, own an automobile, smoke good cigars and go to the show every night. The bank president dreams of the day when he can turn again to the farm and walk in the green fields, where he can shun the various artificial activities of city life, drink buttermilk and retire with the chickens."

For him, or for anyone, there is no more peace giving occupation than horticulture, and no more fascinating branch of horticulture than nut growing. Let him use his leisure time, whether it be much or little, in learning to bud and graft nut trees, in growing seedling almonds in the search for a hardy, thin-shell-variety, in experimenting with the pine nuts, in breeding blight immune chestnuts and filberts. The solution of any one of these problems will be of immense value to the country. And let him produce some of the infinite series of hybrid nuts that lie within the probabilities of the future. No man can have a better hobby, that universal need, than nut growing.—Dr. Wm. C. Deming in *American Forestry*.

WHOLESALE
GROWERS OF

GRAFTED AND
BUDDED
PECAN TREES

SIMPSON
Nursery Co.

Monticello, Fla.

Berckmans'
Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

Catalogue for the asking

P. J. Berckmans Co.,
FRUITLAND NURSERIES

Augusta, Ga.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

DU PONT

RED CROSS
FARM POWDER



The Original and Largest Selling
Farm Explosive

Why use expensive high power dynamites when this slower, safer farm powder will save you from \$3 to \$5 per hundred pounds and in most farm uses do better work?

BIG BOOK FREE

As pioneers and leaders in developing farming with explosives our booklet gives the latest, most reliable and best illustrated instructions. Write for **HAND BOOK OF EXPLOSIVES No. 325F**

DEALERS WANTED

We want live dealers in towns still open. Get the orders resulting from our advertising. You need not carry nor handle stock. State jobber's name or bank reference when writing.

E. I. du Pont de Nemours & Company
Established 1802

World's largest makers of farm explosives
Wilmington, Delaware

Northern Nut
TREES

WHEN TO SET THEM
HOW TO SET THEM
SOIL

FERTILIZERS
HARDY PECANS
HICKORY NUTS
ENGLISH WALNUTS
BLACK WALNUTS

NUT TREES AS ORNAMENTALS

NUT TREES FOR COMMERCIAL PROFIT

If you desire information on the above subjects write for our beautiful illustrated catalogue. We also have the trees.

Maryland Nut Nurseries

Office, Room 607 Union Trust Bldg.
WASHINGTON, D. C.

In A. C. Snedeker's orchard at Homestead, Ga., were gathered 550 pounds from fifty trees planted in March, 1911. This yield was from Curtis and Teche, and Schley and Delmas also gave encouraging results. Since the owner obtained nuts from these trees in 1914 and 1915 it shows that he is getting early return on his investment.

The 1916 chestnut crop in New York state proved to be of good quality and early shipments sold for as high as \$14.00 a bushel.

Scalding chestnuts in hot water serves to prevent their becoming infested with worms.

THE WALNUT CURCULIO

This insect is more commonly observed attacking the black walnut, in the fruit of which the larva lives. It was reported in the late 90's as doing considerable damage to young nuts in a large orchard in Louisiana. The beetle is almost an exact counterpart of the pernicious plum curculio in all its stages. It is larger, and when examined critically certain differences can be detected.

An early spray of Paris green applied in the same manner as for the

plum curculio, would hold this insect partially in check. Otherwise the best remedy would be to destroy the infected nuts as often as they are found. If hogs are allowed the run of the orchard before the nuts mature they will attend to this matter.—F. H. Chittenden.

THE FARMERS ARE URGED TO ORDER FERTILIZER EARLY

The shortage of freight cars may seriously delay the fertilizer movement and defeat the "plant early" idea that is being advocated by everyone engaged in the anti-boll weevil campaign. As a rule, the average farmer does not concern himself over railway problems, car shortages, etc., because relatively few of them ship in car load quantities, but if the present car shortage exists at the time farmers usually order out their fertilizer, no matter whether the quantity is one ton or a car load, if the cars cannot be had in greater number than the present supply, many farmers will be disappointed by not receiving his fertilizer in time to permit him to plant his cotton and other crops early and thus take the first practical step to get ahead of the boll weevil.

The Farm Improvement Department of the A. B. & A. is trying in every way it can to induce all farmers to order out their fertilizer immediately in order that they may not be disappointed by delays owing to car shortage, congestion at terminal points, and many other reasons which may cause serious loss if this important part of the farmer's work is not attended to before it is too late. Next to early plowing and more important thing for the cotton planter to do than to order his fertilizer out in advance of the time he needs it.

SOME THINGS TO BE AVOIDED IN CULTIVATING THE PECAN ORCHARD

Nothing less than a whole chapter would do justice to a talk on cultural methods, and neither time nor opportunity will permit such a discussion here. Only the briefest outline can be given. Plant low growing crops between the rows of trees; keep down grass and weeds around them with a hoe; protect from cattle as any other hand planting; use harrow and not a common two-horse plow. Plant the land in cotton, corn, cowpeas, peanuts, melons, or any

STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right. Chas. Crossland, Bennetsville, S. C.

Horticulture

A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$1 per Year

HORTICULTURE PUBLISHING COMPANY

147 Summer Street
Boston, Massachusetts

BUDDER AND GRAFTED ENGLISH WALNUT

and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over

your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES
THE NUT SPECIALIST
Lancaster, Pa.

Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

Bayivew Pecan Nursery C. FORKERT, Proprietor

Ocean Springs :: Mississippi

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

STATEMENT OF OWNERSHIP,

Management, Circulation, etc., required by the Act of August 24, 1912, of The Nut-Grower, published monthly at Waycross, Ga., October 1, 1916.

Editor, J. F. Wilson, Waycross, Ga. Managing Editor, None.

Business Manager, Chas. N. Wilson, Waycross, Ga.

Publisher, The Nut-Grower Co., Waycross, Ga.

Stockholders holding one per cent or more of total amount of stock:

J. F. Wilson, Waycross, Ga.

Chas. N. Wilson, Waycross, Ga.

G. M. Bacon, DeWitt, Ga.

H. C. White, Putney, Ga.

E. G. Wilson, Waycross, Ga.

M. A. Wilson, Waycross, Ga.

Known bondholders, mortgagees, and other security holders, holding one per cent or more of the total amount of bonds, mortgages or other securities: None.

J. F. WILSON, Editor.

Sworn to and subscribed before me this 1st day of October, 1916.

J. S. ELKINS,

Notary Public Ware Co., Ga.

My commission expires Aug. 11, 1918.

ROOD PECAN GROVES

FANCY EATING PECANS (Mammoth Brand)

Medium Size Seedling Pecan Nuts	20 cents per pound.	\$17.50 per 100 pounds
Large Size Seedling Pecan Nuts.....	25 cents per pound.	\$22.50 per 100 pounds
Jumbo Size Seedling Pecan Nuts.....	35 cents per pound.	\$30.00 per 100 pounds
Large Standard Soft Shell Pecan Nuts.....	50 cents per pound.	\$45.00 per 100 pounds
Jumbo Standard Soft Shell Pecan Nuts.....	75 cents per pound.	\$60.00 per 100 pounds

Each Nut Hand Selected.

Put up in fancy 1, 2, 3, 5, and 10 pound boxes. A box of Pecan Nuts makes a beautiful gift. Texas Nut Crackers, that screw to table, gets any kind of cultivated nut out whole, \$1.00 each.

PECAN TREES (Budded or Grafted)

Stuart, Schley, Van Deman and Frotscher Varieties

	1	10	100	1000		1	10	100	1000
1 to 2 feet in height.....	50c	\$3.00	\$25.00	\$200.00	4 to 5 feet in height.....	70c	6.00	50.00	400.00
2 to 3 feet in height.....	55c	4.50	35.00	250.00	5 to 6 feet in height.....	80c	7.00	60.00	500.00
3 to 4 feet in height.....	60c	5.00	40.00	300.00	6 to 7 feet in height.....	90c	8.00	70.00	600.00

Selected 7 to 10 foot trees for street, yard and lawn planting, \$1.00 each.

5 at 10 rate, 50 at 100 rate, 500 at 1000 rate.

ENGLISH WALNUT TREES

California and New York English Walnuts that are grafted on black walnut roots.

1 to 3 feet high.....	50c each	3 to 5 feet high.....	\$1.00 each
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SHELLED PECAN NUTS

Medium size Shelled Pecan Nut Halves.....	\$.75 per pound, \$60.00 per 100 pounds
Jumbo size Shelled Pecan Nut Halves.....	1.25 per pound, 100.00 per 100 pounds
Pieces Shelled Pecan Nuts.....	.60 per pound, 55.00 per 100 pounds

WE CAN SELL YOUR PECAN NUTS FOR YOU

IF YOU HAVE ANY KINDS OR SIZES OF PECAN NUTS FOR SALE, SEND SAMPLES AND PRICES AS WE CAN SELL THEM FOR YOU.

We have for sale a beautiful farm of 84 acres that is in less than four miles of this city. The land is practically square, slightly rolling to level. Every inch can be cultivated. On this farm is a good house, barn, two out-houses and well. The house is now occupied by a negro tenant and his family; they are now cultivating this land. This farm will make a beautiful pecan grove and if we do not sell in a month's time we expect to plant the entire place in grove. This land is on one of the very finest automobile roads that leads from this city. Can give terms for part payments.

EXPERT BUDDERS

We make a specialty of sending out our expert budders and bud nurseries and top-bud seedling pecan trees that do not bear large regular crops of large pecan nuts.

Pecan and English Walnut grafts and budding cloth for sale. Full planting instructions with each shipment of trees. All prices F. O. B. Albany, Ga.

ROOD PECAN GROVES

C. M. ROOD, Pres.

ALBANY, GA.

kind of truck crop; do not plant too close to the trees. Should grass or weeds get something of a start after laying by time beseech high heaven to protect you from the folly of burning off the land. Remember every day in the week—Sundays, holidays and rainy days—that the fool with fire is one of the worst destructive enemies that ever made havoc of the hopes of the pecan planter. Only one other more completely fulfills the mission of a destroying angel, and that is the sorry white man. He is more terrible than an army with banners. He not only tears up the trees with single-trees, double-trees and trace chains, but uses fire on every possible occasion. He straddles the rows of trees with his wagon when gathering the crop, and when a young tree is too large to straddle, he runs the hub of his wagon against it, tearing the bark from the stem clean around if possible. He allows stock to break in on them when crops are growing and turns in his stock to browse on them after crops are gathered. Our brethren of the East complain of the nigger and the mule. We have the same pain in some localities, but consider them altogether lovely when compared to the fool with fire and the sorry white man. In addition to these we have the roving, thieving, white boys—hordes of them—who, when your nut crop has run the gauntlet of other vicissitudes, raids your trees and, after despoiling them of their products, maims and mangles them as if to prove himself an utter degenerate. Oh yes, the nut grower has his troubles the same as other people. Still, the good out-weighs the evil, and, taken altogether, it is such a pleasing and profitable side line that once a beginning is made and first fruits enjoyed, we go on planting year.—Chas. L. Edwards, Dallas, Tex. more and more trees from year to year. — Charles L. Edwards, Dallas, Tex.

EXCHANGE WILL HOLD MEETING

Wm. P. Bullard, Secretary of the National Pecan Growers Exchange has issued the following circular:

At a duly called meeting of the Directors of the National Pecan Growers Exchange held in Albany, Ga., it was resolved that a special meeting of the stockholders be held in Thomasville, Ga., February 6th, 1917, at 10 o'clock, a. m., in the rooms of the Board of Trade. The purpose

THE NUT-GROWER

Established by G. M. Bacon 1889

Incorporated 1903

Most desirable Standard Varieties only

Budded and Grafted

PECAN TREES

Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

Send for new catalog and price list

The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

15,000 PECAN TREES

In desirable grades and standard varieties.
Healthy, well-grown stock.

Write For Prices

All trees fumigated in accordance with Georgia Laws. Certificate of inspection attached to every package.

D. & O. LOTT COMPANY
Waycross, Ga.

Budded and Grafted PECAN TREES

HEALTHY, WELL-GROWN NURSERY STOCK. STANDARD VARIETIES FOR SALE. REASONABLE PRICES. WRITE FOR PRICE LIST

Poland Plantation Nurseries
Monticello, Fla.

Ocean Springs Pecan Nursery

Season 1916-17

Will be pleased to book orders now for Grafted Pecans

No Seedlings
Send for Price List

Chas. E. Pabst

Proprietor

Ocean Springs, Miss.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.



Fine
Pecan
Trees



And Fine Orchards

Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries C.M. Griffing & Company
Macclenny, Florida

Pecan Trees

Satsuma Oranges

—AND—

Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**

Box 21.

Macclenny, Fla.

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

for which this meeting is called is to consider the following:

1. To amend Section 1, Article 2 of the Bylaws of the Exchange, changing the date of the annual meeting of the stockholders from the second Tuesday of April to the first Tuesday in February of each year. If this amendment is adopted then this said meeting at Thomasville will be taken and considered to be the annual meeting of the corporation for this year, instead of the second Tuesday of April, as now provided; and then at this meeting a board of directors will be elected to serve for the year next following, or as their terms of office may provide.

2. To amend Section 1, Article 3 of the Bylaws so as to provide for the election of Directors to serve unequal terms, that is to say: three to serve for one year, three for two years and three for three years: or until their respective successors are elected.


3. To amend Article 6 of the Bylaws so as to make the fiscal year of the corporation to end on January 31st of each year instead of March 31st.

At this Thomasville meeting plans will be discussed for the active and aggressive operations of the Exchange; the foundation has now been laid and it is considered that the time is come to begin to make this Exchange the dominant factor in the marketing of pecans in the United States; and to this end we solicit the cooperation and support of everyone interested in the welfare of the pecan industry.

You are further informed that an amendment to the charter of the Exchange has been secured so as to give each member one vote and not more than one. To those who are not informed as to this corporation will say that the National Pecan Growers Exchange is a co-operative organization solely for the benefit of the grower and without profit to any member, excepting as his pecans are sold and the industry established on a firm and profitable basis. All persons, corporations or associations engaged in growing pecans are eligible to membership upon payment of one dollar. No annual dues.

It is desired to have a full attendance of members, but you who cannot attend will oblige by executing and mailing proxy. Fill in the name of any officer or any person you know will attend. A most cordial invitation is hereby extended to all persons who are interested.

Pecans vs. the Boll Weevil

 **F**ARMERS, the boll weevil is here. What are you going to do about it? What are you going to grow next year and the next and the next? The State and Federal cotton weevil expert who is sojourning in this section says that you will have to pick off the weevil several times early each year; and that you will have to do this, that and the other thing if you hope to raise any cotton at all; and that under the best of conditions and with the best of care the weevil will get twenty-five per cent of your crop every year. Discouraging prospect, is it not?

Diversify! "How, which, when, where and what?" You want to plant that which will yield you most profit and make your farm of the greatest permanent value. That is what you want to do. I tell you pecans will do it and you reply: "I will plant pecan trees if you can convince me that they are of the most practical value." Well, let us reason together for a bit. Listen to this:

1st. Think of the tons upon tons of fine perishable fruits that rot every year before they come into the consumer's hands. Not so with pecans; keep them in a cool place, not necessarily in cold storage, and they may be preserved in perfect flavor for ages.

2nd. With the exception of a limited quantity of inferior pecans in northeastern Mexico, they are not grown outside the United States. This means that we need not bother about foreign importations and tariffs, but on the contrary, we can sell an enormous tonnage in foreign lands if we are ever able to supply the home markets, which I seriously doubt.

3rd. After the first initial expense of establishing the orchard, there is comparatively little expense from year to year. This means a solution in some measure of the vexatious labor problem. Farmers, what would you give to be able to get away from the labor and expense of saving or buying seed (usually buying) every year; and to get away from the everlasting preparing of land, seeding and cultivation? Think it over.

4th. The meat supplies of the world are decreasing every year and prices are always climbing. Pecans are a perfect substitute for meats. The great sanitarium at Battle Creek, Michigan, uses a nut diet to the exclusion of meats. Over-production of pecans? O, dear, no.

Occasionally some light head will drive out through some of the large orchards around Albany and forgetting that the universe is not circumscribed by the boundaries of a county or two will exclaim, "Overdone!" And then those of us who have become accustomed to looking out across the horizon and beyond reply, "Over-production? Never!"

5th. Good pecan trees may live and bear bountiful crops for one or two centuries. Plant pecans and cut out life insurance policies, which are more expensive than the establishment of a pecan orchard.

6th. The market for the fine pecan is increasing by leaps and bounds. The great crop in Georgia this year was bought up three months before maturity. The bountiful crop this year—in fact for the last three years—has placed pecan planting on the pinnacle of safety and profit. One grower not far from Albany told me that a portion of his orchard netted him \$240 per acre profit.

7. Probably no section of the world is better adapted to pecan growing than South Georgia. Does this mean anything to you, Mr. Landowner, you who are perplexed by the coming of the boll weevil and the emigration of the negro? Think it over.

And there are many other things that I could say about pecans, but I have purposely dwelt upon the practical side, the marketing side, because that is the end that has in it either a sting or a blossom, and with pecans it is a blossom and not a sting. There is no use that you can make of your land that will offer you more expectation of profit with the same margin of safety than pecan culture.

But plant only the right varieties, those that are recognized by our National Pecan Growers Exchange as possessing commercial merit. Plant the right kind of trees on the right place and give them the right kind of care and attention, so that in after years they may respond like the caress to the child and repay you a hundred fold.

I grow the right kind of nursery trees and can tell you how to grow the most profitable orchard.

Write, phone or see me for prices and other information.

Bullard Pecan Nurseries

Wm. P. Bullard, Proprietor
ALBANY, GA.

The Nut-Grower

Volume XV November-December, 1916 Number 11



THE difference between greatness that is first-rate and greatness which is second-rate, between heavenly and earthly goodness, is this: the second-rate and the earthly draws admiration on itself. You say how great an act, how good a man! The first-rate and the heavenly imparts itself, inspires a spirit; you feel a kindred something in you that rises up to meet it, and draws you out of yourself, making you better than you were before, and opening out the infinite possibilities of your life and soul.

—F. W. Robertson.

10c per Copy

\$1.00 per Year

Pecan Trees

Budded Paper Shells
Best Variety
 Expert Propagation
 Healthy and Hardy Stock

WRITE FOR PRICES

T. H. PARKER, Moultrie, Ga.

15,000 Pounds Pecans

We expect to have for sale 15,000 pounds of the highest grade, standard size and weight pecans, as follows:

Schley	8,000 lbs.
Stuart	3,000 lbs.
Van Deman	2,500 lbs.
Frotscher	2,000 lbs.

WE WILL SELL IN
 BULK THE WHOLE
 CROP, OR OTHER-
 WISE

Deliveries October 15th and
 January 15th.

KEYSTONE
Pecan Orchard Co.

Groves: Baconton, Ga.
 Offices: Florence, S. C.
 JAS. D. EVANS, President

ITEMS OF INTEREST

Biloxi, Miss., will be the meeting place for the 1917 convention of the National Nut Growers Association.

A packing company at Fort Worth, Texas, received from a customer at Comanche, Texas, 436 pounds of pecans from one tree, for which they paid \$58.76.

G. W. Paisley, who resigned his position three years ago as editor of the Lincoln, Illinois, News-Herald to go to New Boston, Texas, to develop a pecan orchard, has been elected editor-manager of the Albion (Illinois) Journal, and took up his new duties recently. Mr. Paisley had ten acres set to paper shelled varieties of pecan, but in April, 1916, had the misfortune to fall from a fence and break his right leg, which was later amputated. Although he can get about on an artificial limb, he found he was unable to continue the pecan work and has leased his farm.

The W. B. Dukes
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Cairo, Ga.

THE NUT-GROWER

VOL. XV

WAYCROSS, GA., NOVEMBER-DECEMBER, 1916

No. 11

FILBERT TESTS IN NEW YORK

By JAS. S. McGLENNON.

Read at the National Nut Growers' Convention

UNTIL the summer of 1914, from 1889 I had been in the retail nursery business selling fruit and ornamental stock to consumers through agents. For about five years prior to 1914 I thought I could discern the "handwriting on the wall" with regard to the possibilities of nut culture in this country. This dim sight gradually improved as the result of careful consideration of facts and figures relative to home production and our importations of nuts. I believed that the wide range of climates and soils of this country made it possible to produce in our own country practically every kind of nut we imported.

Realizing that too many irons in the fire meant that some, if not all, might burn, and being an advocate of specializing, I proceeded to determine the one kind of nut I should select as my "hobby." I at this time realized that, while my preference was for that king of nuts the thinshelled pecan, for obvious reasons I would be unable to pursue that leading, more particularly on account of the apparent limited and restricted area in which this wonderful work of nature seemed to be indigenous.

About this time one of my agents, Mr. Edward Kennedy, a man of sterling qualities, who had represented me in my nursery business for years, and like myself, a Canadian by birth, came to me and said, "Jim, if I had a good hazel to sell I could make our fortune selling it through the Canadian northwest. (Ed had spent several years in that country and was very strongly attracted to it.) His remark set me thinking that maybe the hazel was the nut for me to tackle. Almost simultaneously with Mr. Kennedy's remark, there came to me a man whose acquaintance I had formed through our kindred interest in horticulture, by name Conrad Vollertson, carrying with him branches of foliage and green nuts of what he stated were improved filberts. The original plants had been imported from Germany by one of our estimable Rochester ladies, whose beautiful home here, Mr. Vollertsen had charge of

for many years. He told me a most interesting story relative to the nature and habits of these improved filberts and their wonderful performances in the way of crop production.

Mr. Vollertsen, like Mr. Kennedy, felt that there was a great future for the improved filbert in this country if someone would only take the initiative in propagating it, mentioning that they could be propagated from layers, like berry bushes and the like. When he made that statement, I considered that he was theorizing and about made up my mind that, notwithstanding he enjoyed an enviable reputation in and around Rochester, not only as a horticulturist and and landscape architect, but for undiluted honor and integrity, he was disillusioned with regard to propagating the hazel after that manner. From what I knew of it the only way to propagate the hazel, in my estimation, was by budding and grafting. But Mr. Vollertson explained to me that he had served his apprenticeship in a large nursery in Germany in which great quantities of improved filberts were propagated in the manner he described and that he was familiar with the method and knew that he could produce plants by that method. (I might just here mention that Mr. Vollertsen stated that the German nursery referred to made extensive shipments of their filbert product (plants) to the Province of Riga in Russia. I told Mr. Vollertsen, after several talk with his on the subject, that I would proceed to learn, if possible, just what had been done, if anything with the improved filbert in this country. The results of such investigation were decidedly discouraging, for I found that attempts had been made, in different parts of the country, to propagate the improved filbert, but that in practically every instances the early development of blight had made short shrift of the efforts. And no one seemed to pay any attention to my reference to the possibility of propagating the filbert by the layering process, and the few who did frankly stated that "it can't be did." By this time

I concluded that if Mr. Vollertson could "show me" I would be willing to be shown. So at his suggestion I communicated with a reliable nursery in Germany, inquiring what they had in improved, large fruit, thin-shelled European filbert. Their response enumerated a long list of varieties. We considered that twenty varieties would be sufficient with which to determine, say a dozen or ten varieties that we hoped might be found to be propagatable in this climate, and so I ordered five plants each of what that nursery considered its twenty best varieties, 18 to 24 inch grade.

The shipment arrived in the early spring of 1912. I immediately turned it over to Mr. Vollertson and said, "There you are, meiner freund; now show me." We found, on unpacking the plants, that all were in excellent condition with the exception of one variety—in our estimation, the best variety of the whole twenty. Four of the five plants of this variety were apparently dead, due, it seemed, to a possibility that the shipment had rested too near steam pipes on the steamer. The other one looked as though it might pull through by careful nursing. We planted all five, but four of them made no sign of life. The fifth one was, you may be sure most carefully nursed and guarded, and I am very happy in being able to say that we now have the nucleus of a big stock of this splendid variety No. 20, Merveille de Bollweiler. This is one of the varieties that has borne fruit. The nut is large, conical in shape and mighty good to look upon. The shell is thin and the kernel full-sized, of excellent flavor and very fine texture.

But I digress. We set out our hundred plants in a small garden-patch, the soil being what might be fittingly described as sandy loam, planting them about three feet apart. As we didn't want any "come-back" from the plants, we worked into the soil 200 pounds of sheep manure. This proved to be test No. 1: to-wit, that the super-fertile soil, with its great wood growth and therefore fruit producing tendencies deteriorated. We became satisfied that the improved filbert would do better than otherwise in just ordinary farm soil, (which fact we have subsequently proved by subsequently planting in ordinary farm soil which might be fittingly described as sandy loam.) The plants made a wonderful growth that year, but gave no signs of crop tendencies.

The winter following (1912-13) was the kind that can best be described by saying that it "blew hot and cold." We gave the plants no extra protection. The lowest temperature we had that winter was 1 degree above zero (March 8th); the highest 62 degrees; mean 30 degrees. The spring of 1913 found each and every plant in healthy and thrifty condition.

I very naturally expected that we would begin our "layering" that spring. I waited for Mr. Vollertson to say something to me about it. But he didn't. I hinted at it a few times but he made no intelligible response. I naturally concluded that he had gotten "cold feet" on the layering process subject. In the latter part of May I concluded to force an issue, so to speak, and put it up to Mr. Vollertson, the fact that I had procured those plants for certain purposes not the least of which was to experiment and learn, if possible, whether they could be propagated by the layering method. Reluctantly, it seemed, he proceeded to layer a few of the plants. It had been long years since he had done anything like that in his native Germany. But apparently his hand had lost none of its cunning, for as we carefully watched for results we developing rootings, as we had hoped for and desired.

That year, the second, 1913, the plants made phenomenal growth and crowded full to overflowing our garden-patch, necessitating the engagement of larger quarters, particularly on account of the likelihood that our layering method of propagation was that, like Australian rabbits, our plants would multiply with astonishing rapidity.

The winter of 1913 and 1914 recorded the following temperatures: High, 59 degrees; low, 11 degrees below zero; mean, 26 degrees. No protection had been given the plants.

So the following spring, 1914, we acquired on the outskirts of the city, a piece of land that impressed us as being suitable for our purposes. This land might almost be fittingly described as a sandy loam. It had been used for most part for just ordinary farm purposes, but the immediate years preceding our acquisition of it, it had been used as a commercial berry patch. We immediately cleared that plat and prepared for a permanent trial-ground and then transferred our stock, except for a few of the parent plants, left principally for the purpose of further experimentation relative to productivity, or otherwise. They have proven to be otherwise, but on account of the exceptional wood growth we are satisfied that failure of fruit was and is due to the too rich soil. The transplantation was entirely successful. We set the plants approximately 12 feet apart each way, to the end of having sufficient room to lay-down the branches for propagating purposes. That season, 1914, the plants made satisfactory growth, a more natural growth than had been made by the parent plants in the rich, fertilized garden soil. This we attributed to the fact that the soil was just ordinary, unfertilized farm soil, and during the season many of the plants developed sterile blossoms, indicating fruiting proclivities. (This season, 1914, three of the plants

produced perfect fruit, a few nuts each.) We laid down a considerable number of plants that season.

The following winter of 1914-1915 registered a high temperature of 60 degrees; a low of 1 degree below zero; and a mean of 27 degrees. No protection was given to the plants.

The following spring, 1915, we found all of the plants to be alive and in healthy and thrifty condition. The young plants propagated from layers made splendid progress that season. The older ones, that had developed staminate blossoms, in due time developed pistillate blossoms and therefore showed the proper evidence that they would bear fruit, and did bear fruit—twelve of them. This fruit ripened to perfection during the first half of September. This was in 1915. We found the fruit to be true to type, and very satisfactory as to sizes, thinness of shell, plumpness of kernels, richness of flavor, etc. Most of this fruit was from young plants that we had propagated from layers, thereby proving our claim of complete success for propagating by that method, and also that the new plants so propagated would produce fruit true to type.

During the season of 1915 we laid down a considerable number of branches of each variety.

GRADING NEW VARIETIES

Early in the history of the National Nut Growers Association a scale of points was adopted for grading pecans. This systematized the selection of the standard varieties and acted as a restraint in the undue multiplication of varieties lacking sufficient merit to warrant their general propagation. In recent years, and since the United States Department of Agriculture has been giving attention to the industry, this grading and classifying of pecans has been largely in the hands of Mr. C. A. Reed, who, as chairman of the association's committee on varieties, has directed such examinations as have been made more recently. The association committee on Nomenclature and Standards meets but once a year at the annual convention, with the result that grading is a slow and not always satisfactory process.

With a view to supplementing the work of this committee, as well as for giving early reports and general publicity to this essential feature of the industry, The Nut-Grower has, with the cooperation of a number of practical pecan experts who are free from governmental restrictions, arranged for the systematic examination of such nuts as the editor may deem worthy of extended consideration. While the association's scale of points, is slightly modified so as not to discriminate against small nuts when they are suited for producing nut

kernels, this will be but the initial step in the extended examination which involves the tree character and performances during a series of years and under varying conditions and environments. The variety must make good in order to win final endorsement.

In each case where a variety is accepted for examination, the good points, as well as its weaknesses, will be faithfully recorded and given such publicity as may be considered beneficial to our readers. Thus this work will partake of the nature of a training school for successful commercial operations with pecans. Incidentally it becomes a factor in showing what the nut offers when cultivated under circumstances which promise the highest possible results.

PECANS VS. COTTON

Everyone who has come into personal touch with Mr. W. C. Jones, of Cairo, Ga., admires his optimistic faith in the pecan. After years of experience, he has to say about it:

"The experimental stage of the pecan is past and we are coming into the fuller realization of what the pecan is to be in the development of our great country. The trees are proving their worth in the bearing of the finest of nuts with the best of prices. The pecan area is practically the cotton area of the United States. The best cotton lands produce the best pecans. After a grove is well-established, a pound of pecans can be grown cheaper than a pound of cotton.

Over-production is practically out of the question. Out of 100,000,000 people in our nation, we think we can safely say that not more than one in a thousand know that there is such a nut grown as the fine paper shell variety. The value of a pecan grove of the budded varieties in full bearing is difficult to estimate. The writer knows two trees in Cairo, Ga., well worth \$1,000.00 each. After twenty years of experience, the writer is fully convinced that if you will plant a small grove of budded pecans and care for them well, they will care for you in old age, and no better commercial investment can be made on a large scale."

Important changes are coming in the pecan industry. For years past our policy has been to foster and encourage the planting of orchards. Now we have orchards of thousands of acres in five or six states, without counting Texas, which is in a class by itself. The dominant interest is to find a ready and profitable market for the product of the finer varieties. Substantial progress is now being made along that line.

The Nut-Grower

Published monthly by The Nut-Grower Company

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Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



The combination of pecans, pigs and peas, with a little pep added, is one that is rather hard to beat.

A writer in the Gulf Coast Grower advocates sheep as a desirable by-product for the pecan orchard, claiming that it is a combination which works well.

The magnitude of the palm oil and kernel industry in West Africa is indicated in the consular reports, which show exports of oil to the extent of 110,000 tons and twice that weight in kernels.

It is not only in the south, where the pecan leads, that The Nut Grower is serviceable as an advertising medium. A nurseryman in Pennsylvania volunteers the information that advertising in this journal has paid as well as any placed, and better than most others.

Mr. E. L. Worsham, in an address at Waycross, said that the boll weevil will revolutionize southern agriculture, and eliminate over-production of the staple. Diversified crops, seed selection, deep plowing and intensive cultivation, with liberal fertilizing, will be better than the former one-crop custom.

The state of Florida has an efficient and enthusiastic worker in Miss Agnes Ellen Harris, the State Home Demonstration Agent, Tallahassee. The several nut recipes appearing in this issue show her appreciation of nuts in the domestic line.

Mr. J. B. Wight's offer for the best seedling pecan worthy of propagation, brought out nine entries at the Georgia State Fair. Mr. Reed, of

the Bureau of Plant Industry, and Professor Firor, of the Georgia State Agricultural College, are investigating the merits of the trees as well as the character of the nuts before making their report.

The imp of mischief got in some work in our classified ad. column and juggled figures in the ads. of Gaylord of Alabama and Cowgill of Iowa. The former offers 220 acres rather than 25, while the orchard offered cost \$4,000 rather than the small amount indicated. The simple absence of a needed cipher in each case perverted good intentions.

The Tifton (Ga.) Gazette recently reported that the orchard of W. W. Timmons, at that place, which contains 300 seven-year-old pecan trees, produced 3,800 pounds the past season. These trees are of standard thin-shelled varieties, and the nuts were sold for about 40 cents a pound. As the orchard contains about 15 acres it looks like close to a hundred dollars per acre from the pecans. This orchard has been yielding increasing crops for the past three years.

At the Georgia-Florida Pecan Growers Association the past season the following was reported by the committee on resolutions, and was one of those that met with enough favor to be adopted: "Resolved, That the standing committee on Statistics of the Association be directed to assemble and tabulate annually information as to the acreage planted, and crops produced in our particular territory." It is recalled that a report of this kind made years ago gave the first authentic information as to the importance of the pecan in the territory covered by this organization, and that the phenomenal increase in orchard area followed directly afterwards.

An interesting feature of the circulation of The Nut-Grower is the way several shrewd nurserymen contribute substantially to the subscription list, and at the same time enable their customers to have all the advantages of getting started right in the pecan line. They simply present new patrons with a year's subscription and encourage them to read it carefully and regularly. A great many names that get on our list in this way remain there permanently. We seldom hear of failures among those who belong to our family, while the advertisers who regularly use our space have uniformly prospered. Then we are in a position to recognize the marked success and growing prominence of those who are active in sending us annually lists of increasing dimensions. One South Georgia nursery seems to double its list each year. We hope to gain many more supporters of this kind.

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PECAN TREES

NURSERYMEN—AND—PLANTERS

Be your wants large or small, we can fill them from our fine blocks of trees.

It will be greatly to your advantage to write us for terms and prices.

Our stock will please the most exacting.

FLORIDA NURSERIES

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NUT TREES, PECANS WALNUTS

Also 1000 acres in nursery. We grow a general line of nursery stock, suitable for the South. Plant more trees and less cotton. Write for illustrated catalog.

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"The Standard Railroad of the South"

SEE A. C. L. TICKET AGENTS
REGARDING SUMMER
TOURIST FARES, SCHEDULES,
ETC., TO VARIOUS SUMMER
RESORTS

Passenger Service Unexcelled

FILBERT TESTS IN NEW YORK

(Continued from page 165)

The lowest temperature for that winter was three degrees below, March 18th, the highest 63 degrees, and the mean 27 degrees. The unseasonably warm weather of the latter part of January, followed by really severe weather during February and March, played havoc with the abundance of sterile bloom which had developed during the growing season of 1915, with the result that we gathered fruit this season, 1916, from only three more varieties. Also, a few of last year's layered plants succumbed to the rigors of an exceptional winter.

The general growth of all our plants, however, this season has been very satisfactory. We had an unusually wet and cold spring. In fact, the unusually wet weather continued well into the summer, and we at times thought that it would seriously handicap us in our work of layering. But during July and August we got down a satisfactory number of branches, and we es-

timate that we shall have between 4,500 and 5,000 plants to transplant next spring and suitable for market in the late fall of 1917. We have now approximately one hundred plants of fruiting age for sale. These are some of the original lot we layered, and some of them bore fruit last year. They are of 4 to five feet grade, well balanced and splendidly rooted.

Our method of propagating is as follows: A branch is bent to earth at nearest possible contact, care being taken not to over-strain the limb and not to stretch the bark too much. The branch is laid out straight in a furrow 3 to 4 inches deep, made as it is being bent down and pressed in, in accordance with the requirements of the plant. At a point on the branch deepest in the earth make a sharp-knife cut on the underside, the length of which will be governed by the circumference of the plant. Then, after securing the branch in its new position, with forked sticks, cover with earth, packing same in good and tight, except for the end, which permit to extend above the earth

and then "cut-back same.

Should the branches be stiff ones it is well, besides the "pinning-down" referred to, to place some stones, bricks, etc., over the buried part of it, to be sure that it will be securely held in place. And if the branches is of the more erect growth, and large caliber, then where it is bent at the original growth bind with wide bands of canvass, or similar cloth, to other branches adjoining, hereby furnishing protection against possible breakage at this point from any unusually strain that might develop. "Layering", as we call it, can be done at any time the ground is workable. Plants "put-down" by us last spring, we dug this fall and transplanted and shall grow them another year. We found them only fairly well rooted. We were disappointed in this connection. We rather thought that they would be sufficiently well rooted to warrant putting them on the market as salable plants, but we found, on digging them out, that, while they had made a phenomenal wood growth, they hadn't made a proportionate root growth, showing, therefore, that they had been freely nursing the parent plant. There is sufficient root, however, to insure a fine plant with another year's growth in the nursery row.

We contend that we are justified in coming to the public with a proposition that has been thoroughly tested and proven to be found not wanting, because we know that "the goods" are perfectly hardy. We know that they will do well in just ordinary farm soil and require little, if any, fertilizer. As an ornamental Shrub the plant is on account of its magnificent foilgae and graceful lines, most desirable to decorate any lawn. As Dr. Morris said, contemplation of erection of a home should incorporate consideration of planting of improved filbert bushes; in fact, that the

filbert bushes should be planted first, and the home erected afterward. And we know that they will bear fruit true to type. At least we know that fifteen varieties will, and it is reasonable to suppose that the other five will, also. And with regard to blight, which seems to have been the bug-bear of experiments heretofore made in this Country, we will say, that there has not been the slightest semblance of the kind in any of our plantings and we believe that proper cultivation tends to prevent its development. But should it appear it seems reasonable to us to suppose that the cutting-out of the blighted part, as recommended by Dr. Morris, is an efficient method of control of such condition. It means eternal vigilance—true, but is it not a fact that "eternal vigilance is the price of liberty" in any and every phase of life? I believe so.

Consideration of the figures related to our importation of filberts coupled to remembrance of our wide ranges of climates and soils encourage the thought that all the money which we are paying to foreign countries every year for filbert nuts can be kept at home by producing the product in our own country. There is no doubt in our minds that commercial filbert patches in our country would be found to be a very profitable business. It is our intention to develop a commercial filbert patch. We already have taken some steps to such an end. We will tell you in two or three years how we made out.

I forgot to state that our smaller varieties bear earlier and more abundantly than our larger varieties. They are much freer pollenizers.

Men of earnest thought and quiet contemplation exercise a wonderful influence over men of action.

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A Recent Discovery

COMBINES MANY DESIRABLE QUALITIES. IT HAS SIZE, THIN SHELL, AND A PLUMP KERNEL, IS A SPLENDID CRACKER AND HAS AN EXCELLENT FLAVOR.

The tree is a vigorous grower, a regular and abundant bearer and is resistant to disease and insects.

Write for free leaflet giving the story of pedigree and record of bearing as written by the editor of The Nut-Grower.

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We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUP T BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

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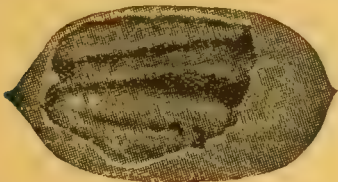
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Write for prices.

**SOUTHERN NUT
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The Pecan Business

In a concise booklet—**FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.
B. W. STONE ∴ Thomasville, Ga.

For Sale—Back numbers of *The Nut-Grower*. Parties desiring to complete their files should send list of what they need. **THE NUT-GROWER COMPANY, Waycross, Ga.** if

CHOOSING PECAN VARIETIES

(Read by C. A. Reed at the Jacksonville meeting of the National Nut Growers Association.)

The behavior of any variety of pecan depends so largely upon the conditions under which it is grown, and, in a word, so much upon the man who has grown it that there is small chance of our knowing definitely within another decade what varieties will succeed in any given section and what will fail. It is quite well understood that southern varieties should not be planted in the North, or vice versa, and that varieties from semi-arid, or West Texas are not adapted to conditions from Middle Texas, eastward, and that, for the present at least, the varieties which have originated in the States of Louisiana, Mississippi, Georgia and Florida must be depended upon for all commercial planting in the plains sections of all states extending from the Carolinas south and west to Lower and Middle Texas. The West Texas, New Mexico and Arizona planters had probably best depend largely upon the West Texas sorts for their planting. No one would advise commercial planting of any varieties in these states except in sections where ample moisture is assured, either from natural sources, or by irrigation. Under such conditions it is possible if not probable, that even the eastern varieties may successfully be grown in some sections of those states. California, Oregon and Washington should test out the best varieties that the South and the Southwest have to offer before attempting to plant commercially.

But, coming back to general statements regarding varieties for the South and Southwest, it appears that varieties are more adaptive to conditions and men than are men to conditions and varieties. Also it may be said

that within reasonable limits, the range of conditions in different sections is less material than is the range in men.

The writer would say that the success of a variety, if reasonably well chosen, depends, say 20 per cent. upon the variety itself, 20 per cent. upon the conditions, and 60 per cent. upon the man. If the man be equal to 60 per cent. of an undertaking reasonably expected to become a success, he will not plant trees of any variety in a wretchedly barren soil, or one which cannot be drained.

Everybody knows what even a hundred per cent. variety cannot and will not do with a 25 per cent. soil and a 25 per cent. man as partners. The man who plants a 50 per cent. grade of trees in a 50 per cent. soil, even though he may have chosen a hundred per cent. variety, can count himself in about an 8 per cent. class, and he will get about an 8 per cent. crop. While the 80 or 100 per cent. man who plants 80 or 100 per cent. grade of trees, of an 80 or 100 per cent. variety, in an 80 or 100 per cent. soil, will get about an 80 or 100 per cent. crop.

Definitely here is an equation: An X per cent. man plus an X per cent. soil plus an X per cent. variety will equal an X per cent. crop.

So much now for what we care least to be told, but which we, in the pecan fraternity, have always known, and which, from this moment, we all know that everybody else knows. Now for what we had expected to hear.

To begin with, there are two sharply distinct points of view from which to regard any variety. Also there is a third viewpoint which is not altogether distinct from the second. The first is that of the orchardist, who very naturally judges a variety largely by the ease with which it may be grown, its vigor, its resistance to insect pests and fungus diseases, its bearing habits, etc. The second viewpoint is that of

the dealer—and be it known that the dealers would as cheerfully sell blocks of wood or lumps of clay if the consumers would pay the price.

He cares for a variety only to the extent to which it will sell with minimum effort on his part. With him merit depends largely upon size, appearance and to some extent upon cracking quality. To him plumpness, richness and flavor of kernel have until recently been of least importance. Lastly, there is the viewpoint of the consumer, who depends altogether upon the quantity and merit of kernel for his "value received". To a considerable extent both growers and dealers have largely ignored the obvious fact that the permanent consumer buys for palate purpose only and that he cares nothing about the effort it may have cost to produce the nut except as it affects the price. The consumer has no possible use for nut shells except as kernel containers. He can no more eat the shell of a pecan than he could the barrel which contained the apples or the crate in which the potatoes were delivered.

It is coming to be well understood that there are two distinct nut markets. One is the fancy market which calls for attractive appearing nuts of large size, which are not necessarily easy to crack or even well filled. To an increasing extent this market is coming to insist upon a plump, rich kernel as well as a large shell. The second is the staple market into which the bulk of all pecans eventually must go. Within reasonable limits, it disregards size, exterior appearance and even the thickness of the shell, but it insists upon good cracking quality and plump, rich and sweet kernels. It demands nuts of good, rather than excellent merit.

It is upon this latter market that must be depended for the

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You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.

L. Majewski, Gen. Mgr.

SAFETY FIRST

Should be applied in purchasing nursery stock and we warn prospective planters to

BEWARE

of the small, back-yard concern that, on account of prevailing conditions, is offering inferior stock at low prices. In the end this is a poor investment.

A QUARTER OF A CENTURY

we have been in the nursery business and hope to remain in it another like period, therefore we safeguard our reputation by supplying our customers only with dependable stock.

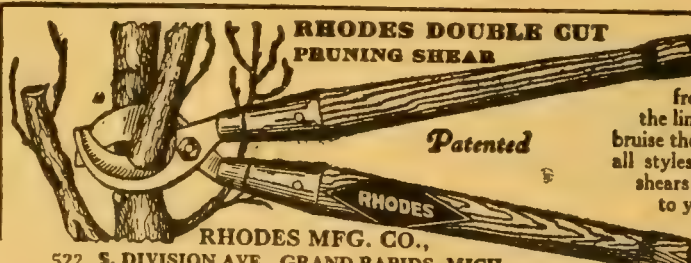
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vast bulk of all pecans produced, and right here it might be said that the general pecan market is still but slightly affected by the orchard pecan. The last census showed that in 1909, the entire

pecan crop of the United States was between nine and ten million pounds, of which probably less than 25,000 pounds were orchard grown. Certainly not more than 50,000 were from this

FOR SALE

Grafting Wood of Stuart, Frotscher, Teche. MRS. M. L. RANDOLPH, Bayou Goula, La., "Blythewood Pecan Grove." 10-6

For Sale—45 acre Budded Pecan Orchard, 3 and 4 years old; Budded Pecan trees and Bud-wood; also improved Farms. C. W. Ransom, Houston, Tex. 8-4

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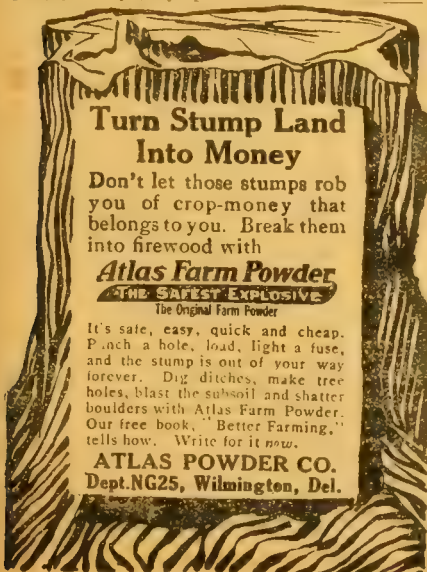
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source. Better care of the native pecan trees and greater diligence erially increased the apparent erially increased the apparent production until last year (1915) when the crop amounted to, let us suppose, 11,000,000 pounds. The crop of orchard or cultivated pecans last year was estimated at approximately 750,000 pounds or, if our estimate of the forest pecans was correct, approximately one-twelfth that of the entire yield. This year (1916) the native crop will hardly be more than 7 or 8 million pounds or very possibly not more than 5 million, while the orchard crop is probably about the same as that of last year, or about one-tenth of the total.

In this connection, it might also be emphasized that there is not the "great gulf fixed" between the actual merit of the average cultivated pecan and native nuts from the West, that is generally

supposed. The artificially colored, highly polished, and thick-shelled pecans with which we are all familiar in the market as having little if any kernel and an astringent pellicle covering what kernel there may be, do not represent the average nuts from the forest but rather the culls which were of no use in the crackeries. Nuts of this class have gone a long way toward prejudicing public opinion against pecans of all kinds.

Nowhere is pecan prejudice more deeply seated than in the mind of many of our eastern growers, who have entrenched themselves with a much mistaken sense of security in the belief that all western or so-called wild

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pecans are so far inferior to the misnomer, "paper-shells" that there can be no possible danger of competition. A fact which the sooner it becomes generally recognized, the better for all concerned, is that a very large percentage of the western and northern pecans are richer in quality and of more pleasing flavor than are many of the named varieties represented in the collection now on exhibition by this convention.

A condition exists today in the pecan markets of the northern and eastern cities which is not generally well known, and which would be very disconcerting to a considerable portion of the pecan growers, if suddenly realized. It is this: That in many instances pecans under the name of "Texas," "Louisiana," "Mississippi," "Alabama," "Georgia," or "Florida Papershells," or even under true variety names, are sold at from fifty cents to one dollar or more a pound over the same counter as are bright colored, plump and juicy pecan half-kernels from the crackeries at from sixty-five to ninety cents, or rarely one dollar a pound. Thus the cultivated nuts in the shell are attempting to hold their own in competition with the uncultivated product without the shells. Their unusual size, attractive appearance, and their limited numbers have thus far enabled them to succeed in much the same proportion as they have been produced, namely, one to ten or twelve. With the coming into bearing of the enormous acreages planted in the several southern states during the past decade and the increased production of the young orchards already in fruit, it is obvious that the fancy market will dwindle into insignificance in comparison with the staple market of even the cultivated pecans alone, and that there will be lively competition between the nuts of different varieties.

In view of the present situation as here described and our knowledge of varieties which, at best, is limited and under constant revision, it becomes plain that in choosing varieties for planting in any section, the man should first take stock of himself as to whether he be good for 60 per cent. of the success of the undertaking, then whether the land is good for its 20 per cent., and lastly, he should put his best thought into the merits of the varieties themselves.

A somewhat hastily prepared list of the important suggestions which might be made to the tentative planter would be as follows:

1st. Ascertain what varieties are most generally grown and confine a selection to the sorts most popular nearest the particular section, remembering that the trade has already come to recognize certain variety names and that it will accept those varieties with a minimum of objection, whereas other varieties, not known will go slowly. In other words, it is safer to grow varieties for which a demand already exists than to grow those for which a demand must be created.

2nd. Make sure that the reasons for popularity are well founded and that the variety has commercially been under observation for at least ten years.

3rd. Remember that varieties are often temporarily popular because of their performance while young; that certain varieties have a tendency towards over-productiveness; and that there is a definite limit to the physical capacity of each variety. When highly developed in one respect it must make up for it in another. Witness the race horse developed at the cost of strength and the draft horse at the cost of speed. When overly large or phenomenally productive the full development of the kernel is fairly certain to be prevented, especially

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after the first crops, also such varieties are apt to be spasmodic and irregular in bearing habits.

4th. Large plantings of single varieties—and to date experiments of interpollination by the writer fail entirely to indicate the importance of planting of varieties with reference to their blooming periods. From all that has been seen in orchards of commercial size thus far each variety is quite capable of taking care of its own problems of pollination.

5th. While not all varieties respond equally to favorable or unfavorable environment, their individual requirements and ratio to environment are not yet sufficiently well understood to make possible explicit recommendations as to how best to

combine varieties with environment.

6th. Varieties appear to differ in what with people would be called temperament. Some are resolute and perform faithfully, more or less irrespective of environment. Others are particular in their tastes and sensitive to treatment. Such varieties become easily offended at an unfavorable condition possibly at some certain time.

7th. So far as is known—and there is considerable evidence on the subject—thickness or thinness of the shell, unless broken, have no relation to the keeping quality of the nut.

8th. Smoothness and brightness of both outer and inner surfaces, and brittleness of shell are typically associated with richness and plumpness of kernel. Conversely, roughness and toughness of shell usually go with a lack of plumpness, richness and flavor.

9th. Round nuts or those oblong in form with short blunt ends, seldom crack well by machinery. It is quite impossible to crack overly plump nuts without mashing the ends of the halves or crushing them to split. The

best crackers are almost invariably oblong in form, and those which have a little space between the ends of the kernel and those of the shell.

FERTILIZER FOR PECAN NURSERY

It takes at least three years to grow first-class pecan trees, and for this reason, it is very necessary to arrange for a suitable piece of land, also for the best way of fertilizing it. This is one crop that responds well to thorough preparation, and its makes practically a failure on poor preparation. The finest nursery I ever grew was prepared as follows:

One year before the nuts were planted I selected a piece of ground which had a good red clay sub-soil twelve inches below the surface. I broke this land as deep as two large mules could pull a turn plow. Immediately following this pair of mules were three attached to a heavy subsoil plow. In this way I broke the land twenty inches deep. After harrowing I planted it to corn, and well fertilized the corn with complete guano. As I laid by the corn I planted broadcast to peas. The corn crop was a fine one, yielding sixty bushels to the acre. I then took a stalk cutter and cut up the stalks and pea vines. There was so much of this till I had to sharpen a heavy cut-a-way harrow and double-cut it before I could turn under the large amount of pea vines and other vegetable matter. After harrowing, and rows laid off six feet apart, I planted it to pecan nuts. It is needless to say the trees made a satisfactory growth the first year. One summer after the seedlings were budded it produced an exceptionally uniform lot of trees.

Before war conditions interfered with the supply and price of guano, a complete fertilizer made of 8-4-4 or 5-5-5 made a

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very satisfactory fertilizer for applying to nursery-grown pecan trees. At present such advice is not attractive; so, under war conditions, we want to grow the best tree possible with the fertilizer available. To bar off the rows with a turn plow and apply some well rotted stable manure, then on top apply a little acid phosphate. The first gives us nitrogen. The second the acid. Then to run a scooter in this fertilizer twice, good and deep, thus bringing up the subsoil which contains the potash. The action of the stable manure and acid on this subsoil will liberate sufficient potash for the trees. If stable manure is not available, then use cotton seed meal.

Allow me to suggest that the application just suggested should be made early, or else you will run the risk of having the trees grow too late the following fall, which would run the risk of winter killing.

For nursery trees, a desirable practice is to plant a row of peas between the nursery row the first week in August. If planted at this date they will not interfere at all with the growth of the trees, neither will they make sufficient vines to run over the trees, but will aid materially in ripening up the trees for fall digging, and will add humus to the soil, which materially assists in cultivation the following year. Pecan trees grown in this way will produce excellent side roots and trees of very uniform growth.

B. W. STONE.

Thomasville, Ga.

WATCH FOR PECAN SCAB

Pecan scab may be prevalent throughout the growing season but it is more likely to attack in August. In groves where it was found last year, it is almost certain to attack again this year.

The disease is caused by a fungus which grows on the nuts,

twigs and sometimes on the leaves. It may be recognized by the dark green moldy growth.

Spraying with a 4:4:50 Bordeaux mixture is recommended. If the disease has not stopped working in three weeks, another spraying may be given, although one probably will keep it in check. Ammoniacal solution of copper carbonate may be substituted for the Bordeaux, but since it does not stick as well as Bordeaux more frequent application will be necessary. Growers who have been troubled with the disease before should not wait until it appears, because it will be harder to check then.

Clean culture will also help a

great deal in keeping the disease in check. If the diseased nuts and leaves fall they should be collected and burned. This will diminish the severity of attack next year. A thorough spraying should be given in the spring before the leaves start.

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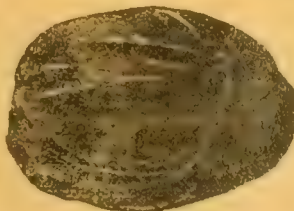
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NUT RECIPES

Nut Bread

2 1-2 cups sifted flour (1-2 Graham 1-2 white), 3 teaspoons baking powder, 3-4 teaspoon salt, 1-3 cup sugar, (1 cup nuts cut into pieces, but not crushed, or 3-4 cup nuts and 1-4 cup raisins), 1 egg, 2-3 cup milk, 3 tablespoons butter.

After mixing the ingredients, put in greased pan. Let stand 10 minutes. Then bake in an oven (not too hot) for 40 minutes. This makes one loaf of bread.

Divinity Fudge

4 cups sugar, 1 cup water, 1 cup Karo syrup (light), 1 cup chopped nuts, whites of two eggs, 1 teaspoon vanilla.

Boil sugar, syrup and water together until it reaches the soft ball stage, when dropped in cold water. If weather is damp, the almost hard ball stage must be reached. Beat eggs until white and foamy. Drop boiled mixture gradually in whites of eggs, beating continually. Beat until mixture is cooled off a little, then put nuts and flavoring in. Beat until thick and drop from teaspoon, or pour on buttered platter and mark in squares.

Chocolate Fudge

2 cups sugar, 3 squares chocolate, 3-4 cup milk, 1 tablespoon butter, 2-3 cup chopped nuts, 1 teaspoon vanilla.

Boil sugar, chocolate and milk until it reaches the soft ball stage, when dropped in cold water. Remove from fire, add butter, cool, add vanilla and beat until thick. Pour on buttered pan or platter, and mark in squares.

AGNES ELLEN HARRIS,
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Tallahassee, Fla.

Pecans vs. the Boll Weevil

FARMERS, the boll weevil is here. What are you going to do about it? What are you going to grow next year and the next and the next? The State and Federal cotton weevil expert who is sojourning in this section says that you will have to pick off the weevil several times early each year; and that you will have to do this, that and the other thing if you hope to raise any cotton at all; and that under the best of conditions and with the best of care the weevil will get twenty-five per cent of your crop every year. Discouraging prospect, is it not?

Diversify! "How, which, when, where and what?" You want to plant that which will yield you most profit and make your farm of the greatest permanent value. That is what you want to do. I tell you pecans will do it and you reply: "I will plant pecan trees if you can convince me that they are of the most practical value." Well, let us reason together for a bit. Listen to this:

1st. Think of the tons upon tons of fine perishable fruits that rot every year before they come into the consumer's hands. Not so with pecans; keep them in a cool place, not necessarily in cold storage, and they may be preserved in perfect flavor for ages.

2nd. With the exception of a limited quantity of inferior pecans in northeastern Mexico, they are not grown outside the United States. This means that we need not bother about foreign importations and tariffs, but on the contrary, we can sell an enormous tonnage in foreign lands if we are ever able to supply the home markets, which I seriously doubt.

3rd. After the first initial expense of establishing the orchard, there is comparatively little expense from year to year. This means a solution in some measure of the vexatious labor problem. Farmers, what would you give to be able to get away from the labor and expense of saving or buying seed (usually buying) every year; and to get away from the everlasting preparing of land, seeding and cultivation? Think it over.

4th. The meat supplies of the world are decreasing every year and prices are always climbing. Pecans are a perfect substitute for meats. The great sanitarium at Battle Creek, Michigan, uses a nut diet to the exclusion of meats. Over-production of pecans? O, dear, no.

Occasionally some light head will drive out through some of the large orchards around Albany and forgetting that the universe is not circumscribed by the boundaries of a county or two will exclaim, "Overdone!" And then those of us who have become accustomed to looking out across the horizon and beyond reply, "Over-production? Never!"

5th. Good pecan trees may live and bear bountiful crops for one or two centuries. Plant pecans and cut out life insurance policies, which are more expensive than the establishment of a pecan orchard.

6th. The market for the fine pecan is increasing by leaps and bounds. The great crop in Georgia this year was bought up three months before maturity. The bountiful crop this year—in fact for the last three years—has placed pecan planting on the pinnacle of safety and profit. One grower not far from Albany told me that a portion of his orchard netted him \$240 per acre profit.

7. Probably no section of the world is better adapted to pecan growing than South Georgia. Does this mean anything to you, Mr. Landowner, you who are perplexed by the coming of the boll weevil and the emigration of the negro? Think it over.

And there are many other things that I could say about pecans, but I have purposely dwelt upon the practical side, the marketing side, because that is the end that has in it either a sting or a blossom, and with pecans it is a blossom and not a sting. There is no use that you can make of your land that will offer you more expectation of profit with the same margin of safety than pecan culture.

But plant only the right varieties, those that are recognized by our National Pecan Growers Exchange as possessing commercial merit. Plant the right kind of trees on the right place and give them the right kind of care and attention, so that in after years they may respond like the caress to the child and repay you a hundred fold.

I grow the right kind of nursery trees and can tell you how to grow the most profitable orchard.

Write, phone or see me for prices and other information.

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Wm. P. Bullard, Proprietor
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The Nut-Grower

Volume XVI January-February, 1917 Number 1



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"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

Subscribers who are interested in strawberries should apply for a copy of the description of pedigreed plants and how to grow them, issued by R. M. Kellogg Co., Three Rivers, Mich.

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THE NUT-GROWER

VOL. XVI


WAYCROSS, GA., JANUARY-FEBRUARY, 1917

No. 1

PREPARING THE NUT CROP FOR MARKET

By J. M. PATTERSON

Read at Georgia-Florida Pecan Growers Association

 HE moving picture is a recent achievement, containing endless possibilities of amusement and education. Doubtless the most notable production in the movie world is Griffith's spectacular production, "The Birth of a Nation." According to the conception of Griffith, this nation was born in the throes of the Civil War.

During the past decade we have witnessed the Birth of a Nut. The paper shell pecan, so called, is the newest member of the great family of edible nuts, and, as we think the United States of America, born in the Civil War, is in many respects the greatest in the family of nations, so we think and know that the cultivated pecan is the greatest of all nuts.

A few years ago the budded or grafted pecan was a prophecy, and prophets there were who foretold wonderful and precocious doings of this nut that was-to be.

Today the cultivated pecan is a reality—it has arrived—it has been born. The birth of this marvelous nut is announced. It is still in its infancy. Multitudes of our fellow-men have not yet heard the glad news, much less tasted the delicious meats of this marvel of the nut world. Nevertheless the nut is a reality and a commercial reality. It is a very small factor, if indeed it can be called a factor, in the marts of trade. But dealers in food all know that the pecan is, and that year by year it will assume increasing importance, in the markets.

A few years since this association was chiefly concerned with ways and means of propagating the pecan, and questions of culture next occupied your attention. While these are still live questions, and no one has exhausted the possibilities of learning how to propagate and cultivate pecan trees—yet we have now passed to the next stage in the evolution of this marvelous nut, and we are now, by the force of facts—the constraint of circumstances, the crops of nuts, constrained to seriously consider how to garner and sell this nut, which but a few short

years ago was a dream and a prophecy. It is therefore because this new nut has been born that I am asked to speak briefly on the theme—"Gathering and Preparing the Nut Crop for Market."

I. Gathering—The method adopted for gathering will be governed largely by circumstances. The man having a few trees, or a few acres of trees, will no doubt find it possible and profitable to gather the nuts as they ripen—going over the trees three or four times. When a large acreage is involved, it will be found impossible to do this. The expense would be excessive. Even with a large acreage, when trees are old enough to yield an average of forty to fifty pounds or more, it probably will be profitable to go over the trees more than once. However, in gathering a large acreage while the trees are young and the yield only a few pounds per tree, it is doubtful if more than one picking will pay. Many of the late nuts are defective, and even though all nuts are not ripe for the one gathering, the loss will be very small.

As to methods of gathering, there seems not much opportunity for a great variety. Nuts do not need to be hand-picked like apples or peaches. The most economical method is to shake and knock the nuts from the trees onto a ground cloth. In doing this great care, of course, must be exercised not to break off many sprouts or small limbs. By the use of bamboo poles, and knocking the branch bearing the nut on the side in place of from the front, little or no damage of any consequence will result.

Varieties should be kept separate. This is readily accomplished, even though the pickers are not able to judge varieties, and even though different varieties are planted in the same tree row. Leave the nuts from each tree under their parent tree, sack them separately, and, when landed in the packing house, let the bags containing each variety be ascertained by someone familiar with the varieties and all of the same variety put in a stack by themselves. Our practice is to take from the field

all the hulls and leaves and separate the nuts from them by machinery. The advantage in taking the hulls from the orchard is to assist in eliminating the shuck worm. We have found it best to have about four laborers to a tree—one to pull off the nuts that can be reached, one with a short pole to thresh the lower limbs and two with longer poles to get the nuts from the higher branches and top of trees.

That the gathering of nuts from a large acreage after the trees are fifteen to twenty years old, or more, will be a colossal job, has already dawned on some of us who responsible for the gathering from several thousand acres of orchards. That pick-ninnies with monkey dexterity and ability for climbing will be at a premium is foreseen. It is probable that in the absence of a sufficient crop of such pickers, wagons will have to be equipped with platforms and scaffolds from which the higher branches can be reached by long bamboo poles.

II. Preparing the Nut Crop for Market—The market for pecans hitherto has been largely a Thanksgiving and holiday market. The appetites of the American people somehow turn to nuts at these seasons of the year, just as the heart of the maiden and young man turn to love in the springtime. But love has already adapted itself to every season of the year, and so we are glad to note that the open season for nuts, or rather the season when people crave nuts, is rapidly being prolonged so that the demand for pecans now outlives the holidays, and the demand for shelled nuts is almost the whole year round.

Nevertheless, it is advisable to get pecans into the market as early as possible. In this region pecans are not fit to gather as a rule until about October 15th, though the exact time varies with seasons. Even then the nuts are not really edible. Pecans need to season and mature and develop their truly delicious flavor after they are apparently perfect. The seasoning or seasoning process can be done by placing them in open bins in the sun, so constructed that the air can freely circulate. It will take several weeks to properly cure the nuts in this perfectly simple way. The same end can be accomplished in twenty-four hours by subjecting the nuts to a drying or evaporating process by mechanical means, in which the temperature need not be greater than sun heat, but in which there is a forced circulation of air. The moisture is quickly removed and the nut very quickly develops its real nutty flavor. That mechanical drying is possible without the loss of flavor, or in any measure impairing either the quality or keeping characteristics of the pecan has been demonstrated. That it would be possible to damage the nut by exposing it to an excessive temperature, there is no doubt. The

Schley nuts, exposed to an excessive temperature, would pop like corn and be practically ruined for market. Artificial drying must be conducted with care and with the thought in mind that the most effective agency is not high temperature, but constant movement of the air, removing the moisture.

The first suggestion then in preparing nuts for market is to have them properly cured. A green pecan, i. e., a pecan that is not reasonably dry is destitute of the real charm of the nut—it lacks the delicious nutty taste. Personally, I much prefer a pecan a year old, kept in proper cold storage, than a new nut that is not properly cured. The nut buyers in the great jobbing and retail houses are already wise to the inferior quality of the nuts that are rushed to market early in the fall, which have not been properly cured. This is true to this extent, that some houses are already making a practice of buying nuts one season and holding them in cold storage for the early fall demand, rather than offer their customers the green, tasteless pecans that some growers, in their feverish haste to beat their competitors, rush into the market when they are not fit for human consumption. A grower that ships pecans that are not fully matured to the market is the enemy of the industry. A well seasoned pecan tastes like more, a green pecan tastes like never no more. Again, let me repeat it, in preparing pecans for market, see to it that they are properly cured, seasoned.

Varieties Separate—A few years since and not one person in a thousand knew there were different varieties of pecans. Speak to them of a Schley, a Stuart or a Van Deman and they would look at you in wonder and amazement; speak to them of pecans and they assumed an air of intelligence. But how quickly the public get wise. A great many people who cannot tell a Schley from a Stuart when they see them together, won't buy any nut but a Schley, others none but a Stuart. They begin to know the names of the varieties and very soon a large percentage of nut eaters will be able to call the name of the nut when they see it. It must be admitted that the popular demand today is not the name or quality, but size. People want big nuts. But we dare to prophesy that a few doses of Nelsons and Mobiles and other monstrosities of the nut kingdom will cure them of the mania for bigness in pecans. Quality always rules in the long run and the nut eaters will soon demand to know what is inside the shell, and from present indications they will call for their favorite pecan by name. Often it has seemed to me a misfortune that the general public were ever taught there were varieties of pecans. The ideal plan, it seems to me, would have been to have taught them that there are only

two kinds—seedlings and cultivated pecans. However, the public cannot be kept in ignorance and today they know that a Tech is not a Schley just as truly as they know that a Ford is not a Packard. So we are compelled to send our pecans to market labelled by varieties.

Mixed nuts—even though they are fine nuts and even though they contain a fair percent of the so-called best nuts—the Schley—do not command the price that any of the standard varieties command. Keep your varieties separate in preparing nuts for market.

Grade—In each variety the size must be approximately uniform in the package offered for sale. The size of nuts of the same variety from different trees varies not a little, and every tree has its quota of small or undersized nuts. This is a day-of standardization and grades. No product of the factory or of the soil that is not standardized can attain commercial success.

Articles of food, to become a factor in the market, must be produced in large quantities and be distributed by great institutions and sold to and by millions of retailers who deliver these articles to the consumer. The very proportions essential to a commercial success necessitates the establishment and strict adherence to standards and grades. This is an accepted principle of trade today. Jobbers and retailers, as well as consumers all demand standards and grades, which indicate beyond a question of a doubt the contents of the package. The Georgia and Florida farmers know that cotton is sold by grades. They know that if they are to get the top price they must produce the highest grade cotton. The United States government has fixed these grades and they govern everywhere. So with wheat, corn, oats, hay, and in fact, everything that the farmer raises.

There is now a complaint in the south that it is useless to prosecute diversified farming, because farmers can't sell their stuff when they raise it. Atlanta has opened a commercial exchange. A recent issue of the Atlanta Constitution devotes an entire page to this commercial exchange. In commenting on the general situation this article says:

"Since farmers of this section have begun to diversify their crops, raising more foodstuffs than they can use themselves, they have quite naturally made sales to dealers of their surplus, and have been much disappointed at the prices offered. Frequently they refuse to sell and complain that dealers prefer to buy northern hay and grains, and because of this discrimination there is no use to attempt diversified farming on a large scale in this territory."

That dealers prefer to handle northern products is true only because the northern grains come

to them clean, graded and sacked in uniform standardized lots, whereas the southern farmer has not yet learned to properly prepare his products for the market. That is the whole cause of any cases of discrimination, and it will be removed just as soon as the southern farmer realizes that he cannot market his food products and get the top price until he competes on the same basis with the northern farmer. The man who sells No. 3 hard wheat and delivers No. 4 hard can no more get the price of No. 3 than the cotton farmer who sells standard middling cotton and delivers yellow tinged middling can get the price of the grade stipulated in the sale.

There is the whole question in a nut shell. Pecan growers must observe fixed standards and grades, or their product will be a drug on the market. Nuts will have to be graded, not only as to size, but as to quality. The empty shells—the shells containing shriveled meats—will have to be eliminated. Just how this is to be done doth not yet appear. However, a way will be opened, and the ultimate standards of grades will take cognizance of the contents of the nut as truly as of its size. An empty pecan shell is not even a near pecan. It is an imposter, a deceiver and a fraud, and must be cast out of the kingdom.

Packages—Pecans should be sent to market in attractive packages, whether it be cartons, cases or bags. They should be new, clean, and—if bags—attractively stenciled. Packages are to pecans what clothes are to the person.

III. Marketing—Buyers are bears. If twenty men offer pecans to a buyer today, even though their aggregate offering is only ten thousand pounds, it will do more to demoralize the price than if one man offers pecans, even though he has one million pounds to sell. Multitudinous offerings of nuts means ruinous prices. Hence, the urgent necessity that growers associate themselves and market through a common selling agency. It is the only way to stabilize prices, otherwise every grower is the ruinous competitor of every other grower; every pecan grower is at the throat of every other pecan grower.

Citrus growers of California and Florida, apple growers of the northwest, peach growers of Georgia, almond and olive growers of California have all been forced to either associated marketing or going out of business.

The market of pecans is a problem—not because we have something to sell that people do not want—but because we have something to sell that 95 per cent. of the people do not know, and for the further reason that we have something to sell without the

The Nut-Grower

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Vol. 1, No. 3

Live stock on the farm which has a pecan orchard as a part of its permanent equipment has a decided advantage, as well as convenience, in supplying the fertilizer required by the trees. Live stock, legumes and pecans in proper combination constitute a strong team which will pull together if properly handled.

As the years go by, with additional experiences and more extended observation the differences between the "possibilities" and "probabilities" of pecan profits are more clearly defined. The possibilities which the industry offers are amply assured, but the probabilities must reckon with the human element, which is not always dependable. Thus the failures, when analyzed, are regularly traceable to other causes than faults of the business.

PECAN PUBLICITY

Several years ago The Nut-Grower, with the assistance of a few leading nut nurserymen, put into operation an effective publicity service for familiarizing the general public with the good qualities of the pecan. The method adopted was simply the issuance of occasionally printed leaflets which were mailed directly to several hundred editors of trade and farm journals, as well as to many prominent weekly papers in the pecan belt. The data and information was for the free use of the busy editors and it was used generously by them and frequently copied by others, so that it reached literally millions of people in all parts of the country. Thus the regular work of The Nut-Grower

and the National Nut Growers Association was made more than doubly effective by this simple expedient.

Then came the great wave of pecan orchard planting with the demand for trees beyond the supply and the consequent planting of great numbers of trees which belonged in the trash pile rather than in an orchard, so that the editor was admonished that the pecan was getting "too much publicity." This condition and feeling, as well as other reasons, interrupted temporarily the service. The European war followed with panicky financial conditions, which in turn arrested to a great extent the commercial orchard planting being financed by the capital assembled from the purchasers of small tracts.

The planting, however, continued, but in another and—in our opinion—a better way. The southern farmer had been taking notice and quietly planting a few trees, to be followed by more in succeeding seasons, until there has arrived what seems to be a new era in the industry, in which the production of the nuts is to be handled by the resident owners of farms, as a part of their operations rather than as pecan specialists. While commercial orcharding will continue and reach great proportions, it is likely to be in modified form, as the owner of small tracts who lives a hundred or a thousand miles away from his orchard too frequently has difficulties and disappointments rather than the anticipated profits after the five years of contract care expires. This results from no fault of the pecan, for it is making good to a surprising extent; but this particular method of handling it has its business limitations, and the non-resident owner is forced to resort to co-operative methods for managing the investment.

In the mean time the supply of trees has overtaken and, to some extent, passed beyond the demand, so that the way now seems open for a new publicity campaign which will feature the resident farmer in the pecan territory as the logical, practicable and convenient agency for utilizing most advantageously the opportunities that the pecan presents. This new era in the industry has been recognized by thoughtful nurserymen who during the past few years have been encouraging the planting of pecans by farmers.

It is our purpose to again take up the systematic publicity with a view to directing wide attention to this new feature of the development of the industry. We are assured of active co-operation on the part of practically all the progressive nut nurserymen, so that the work will not be burdensome to any one, while producing results in constructive development of wide and permanent character.

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PECAN TREES

NURSERYMEN—AND—PLANTERS

Be your wants large or small, we can fill them from our fine blocks of trees.

It will be greatly to your advantage to write us for terms and prices.

Our stock will please the most exacting.

FLORIDA NURSERIES

W. W. BASSETT, Prop.

MONTICELLO, FLA.

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Growing out of the action taken at the Jacksonville convention, a greatly enlarged appropriation was obtained from congress for investigation and control of insects and diseases affecting the pecan. Representative Park, of the Second Georgia district was influential in securing favorable consideration of the request of the Association.

PREPARING THE NUT CROP FOR MARKET

(Continued from page 5.)

established channels through which to distribute our product so that it can reach the consumer at a reasonable cost—a price which the average American citizen can afford to pay.

Will the pecan sell itself? There is no article of manufacture or product of the soil that is a self-seller. The pecan, from a marketing point of view, is a self-starter—but, like the electric starter on your car, it can't pull the load to the end of the road. The gasoline and carburetor have to take up the burden of the car after the motor is set in motion, so some sort of power of salesmanship and some sort of carburetor must be devised in the form of a channel of distribution through which the power of associated marketing can keep the wheels going, and carry the pecan to the willing and anxious consumer.

Our product will soon be a factor in the market. It is a very small factor today, but it is fast becoming a large one. I am not a prophet, but an ordinary disciple can see that with the thousands of acres of

pecans fast coming into bearing that pecans will, in a very few years, be produced in train loads in place of car loads. The annual production will soon be millions of pounds. The day of a deluge of pecans is not far distant, and unless the pecan is standardized, and unless the growers stand shoulder to shoulder and co-operate for mutual protection and interest, they will be consumed by the heartless commission men and other wolves. Prepare for the forthcoming avalanche of pecans by forming local associations, all affiliated with a parent association through which the crops can be sold at a good profit. The individual cannot long market his crop at a profit.

Methods of Marketing—There are the following methods that are available:

1st Mail Order—The usual appeal of the mail order system is that goods of standard quality can be bought at lower prices than they can be secured at retail stores. The cost of advertising and transportation on small lots of pecans to consumers will rob the mail order system of market pecans by the usual mail order appeal. In place of appealing to people who want to save money, pecans by the mail order route will chiefly appeal to those who are willing to pay more in order to get an especially fine grade of nuts. While there is a considerable number of this class of people, yet they are not the rank and file of our citizens. While the mail order method might be employed to a degree, yet it will not begin to care for our crops, and we must rely upon distributing our crops through the established channels of food distribution.

2nd. Direct To Retailers—This is the method to which many growers have resorted. Buyers and department stores in Chicago last year were deluged with circulars and letters from small growers. I happened to meet the grocery department buyer of one of the large Chicago department stores one morning last December, and he told me that in his mail that morning he had letters and circulars from some fifteen people in the south offering pecans, at all sorts of prices. His conclusion was that the south was full of pecans, and that by holding off a little he could buy them at any price he might be willing to mention.

Obviously—the plan of selling direct to retailers, by growers will either have to be discontinued or the market will be thoroughly demoralized.

3rd. Selling through the commission men—The commission man sells to the retailers. No doubt there are some honest commission men. However, if you were to ask people who have consigned vegetables, fruits, ect. to South Water Street, Chicago, you would conclude that you would have to go on a hunt with old Diogenes aided by a search light in place of a candle in order to find them. Speaking of them as a class they have been described as wolves. For sake of argument suppose they are all honest, what then? Nuts is not their business. Their business is fruits, vegetables and poultry. Not one in ten thousand of them know a paper shell pecan from a nigger toe. Their big business is fruits and vegetables. These they handle the year round. When a article is consigned to them that they know little or nothing about which they have to sell only once or twice a year, what happens? They can't make an intelligent statement about it. What they actually do is to use them as "Leaders". A "leader"

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Also 1000 acres in nursery. We grow a general line of nursery stock, suitable for the South. Plant more trees and less cotton. Write for illustrated catalog.

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As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

Along with general farming and stock raising the pecan is proving very profitable.

Write us as to land, prices, and location for such farms.

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"The Standard Railroad of
The South"

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Jacksonville, Fla.

is a bargain—an article offered below value in order to induce a larger trade on other articles. That pecans were handled in this way by commission men in Chicago last year, is well known. The commission man is impossible as a salesman of pecans, and every grower that consign his pecans to a commission man is an enemy of the business.

4th. The Jobber—By the jobber I mean the wholesale merchant. The only jobber that would handle pecans is the wholesale grocer. The wholesale grocer is the natural and legitimate big dealer in nuts. He it is that sells to retail grocers their goods, and having an organization he can naturally handle nuts at less cost than anyone else. He handles a large percent of the

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Pecan

A Recent Discovery

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The tree is a vigorous grower, a regular and abundant bearer and is resistant to disease and insects.

Write for free leaflet giving the story of pedigree and record of bearing as written by the editor of The Nut-Grower.

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Catalog free. We pay express. 420 acres.

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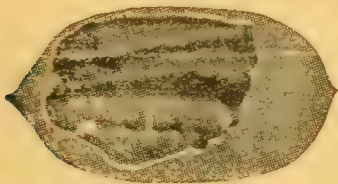
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Our Specialty is growing wellrooted budded and grafted trees of best varieties.

Careful attention given all orders.
Write for prices.

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TREE NURSERIES**
Thomasville, :: Georgia



The Pecan Business

In a concise booklet—**FREE**. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.
B. W. STONE:: Thomasville, Ga.

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. **THE NUT-GROWER COMPANY, Waycross, Ga.** tf

walnuts and other nut crops. But, the jobber does not want to buy from producer, unless he is a very large producer and of unquestioned integrity and financial responsibility. Jobbers want to deal with people from whom they can secure all the nuts they want and when they want them, and they will deal only with people who will furnish them nuts that are absolutely up to grade. The large jobbers their buying to people who are delivering graded nuts and absolutely up to grade. It will only be a few years when the buyer of a wholesale grocery house will not consider pecans offered by a private party, for two reasons. 1st, the small supply, and 2nd, chiefly the uncertainty as to grades. The established principles of jobbing in all sorts of goods handled by wholesale grocers call for grades that are always observed by the seller.

5. The Broker—In many lines of business the broker is being eliminated. Not so in eatables. Canned goods, dried and evaporated fruits of all kinds and nuts are today purchased by the wholesalers almost exclusively through brokers. The California Walnut Growers Association has recently tried to sell direct to wholesalers. The degree of their success I do not know. However, nearly half the walnut crop of California today is sold by brokers. A broker is distinguished from a commission man in that he sells only to retailers. There are brokers and brokers. In every city of considerable size however, there are responsible brokers. For a good many years to come it is my belief that the broker is the man to sell our pecans. I do not mean by this that the individual small grower can sell through a broker. As a rule he cannot, for the reason that the desirable broker is just as particular about grades as anyone; and for the further reason that he does not want a mul-

tiplicity of accounts—but a few large accounts. Our National Pecan Exchange, when it once gets into operation, will, in my judgment, find the broker the best selling agent available. As a matter of economy this will be true. To send out a salesman, or a lot of salesmen will, in my judgment, be altogether too expensive for years to come. Then again, the reputable broker has access to the buyers. He not only gets a hearing every day, but the reputable broker will relieve the buyer's anxiety as to grades and quality. He cannot sell any pecans that are not as represented. It may be that when the pecan crop runs into 500 or 1,000 cars per year the pecan exchange can handle the crop less expensively by dealing direct with jobbers, but even then I doubt it. But for several years, at least, the responsible broker is to my mind the logical and only available agency.

Other Agencies—There are already a few pecan sales companies and individuals who buy nuts to sell by mail order. To my mind they are an aid to the business. They hold up prices and advertise the product, but they will handle only a small percentage of the crop. There are also the great nut houses who make a business of buying and cracking. They are not available for the reason that they cannot afford to pay prices much, if any, above the price of seedlings. No doubt there will develop a considerable business in shelled nuts or nut meats. The small nuts should be put through the cracker form this day onward. But that is only the disposal of what might be called by-products. In this review of possible selling agencies, therefore, we come back to the broker as the most available agent. However, even in dealing through brokers, great caution must be exercised. I am creditably informed that some grower in this region recently

sent to a northern broker, and there the nuts were sold at the following prices:

Extra fancy Schleys (delivered), 17c; other varieties in A-1 condition at same price, and 7c per pound for mixed nuts.

The informant, in his letter concerning this sale, makes this comment: "Think of it—perfectly ridiculous!"

An Available Program—I do not undertake to say that the plan I am about to outline is the only way, but I do undertake to say that so far as my experience has pointed the way, the following is the only promising program for the solution of the problem of selling pecans:

Program: 1st—Nuts should be thoroughly cured; 2nd—Varieties should be kept separate; 3rd—Nuts should be graded as to size and weight; 4th—Grades that have been, or may be established by the National Nut Growers' Association, in conjunction with the Department of Agriculture, should be accepted by all growers and strictly observed; 5th—Nuts should be packed in new and attractive containers, properly and neatly printed or stenciled; 6th—To accomplish the foregoing, local associations should be formed wherever pecans are grown in quantities to warrant, and grading machines and drying places installed and all nuts from the adjacent territory prepared for market in these warehouses; 7th—The National Pecan Exchange should be developed forthwith as a common selling agency, and undertake to market the crops for the present through brokers.

That all this can be accomplished in a day or a year no one imagines. But that the above program with modifications that may be indicated by further experience will either be set in operation now—through the voluntary actions of growers, actuated

by some foresight, or that it will be put in operation a few years hence as the result of financial disaster in the pecan business—I cannot and do not question. Why not be advised by, and profit by the experience of apple and citrus growers, and walnut growers, and take time by the forelock and, "do it now"?

STOCKHOLDERS MEETING

At a recent meeting of the stockholders of the National Pecan Growers Exchange the following Board of Directors was elected: Herbert C. White, Putney, Ga.; J. B. Wight, Cairo, Ga.; B. W. Stone, Thomasville, Ga.; H. K. Miller, Monticello Fla.; J. M. Patterson, Putney, Ga.; R. F. Jackson, Baconton, Ga.; H. W. Smithwick, Americus, Ga.; J. C. Britton, Albany, Ga.; and Wm. P. Bullard, Albany, Ga.

At a subsequent meeting of the new Board the following officers were elected: President, Wm. P. Bullard; Vice-President, J. B. Wight; Treasurer, B. W. Stone of Thomasville Ga., Secretary, J. C. Britton, Albany, Ga.

Col. C. A. Van Duzee was tendered, but refused re-election and in explanation stated that while his whole heart and best wishes were with the organization and that he stood ready at all times to be of any service possible, yet his own private interests required his presents and attention elsewhere.

Georgia-Florida Pecan Growers Association—the eleventh annual meeting of this body will be held at Thomasville, Ga., May 30-31, 1917. Acarefully prepared program is being arranged and an interesting and profitable meeting is assured.

Budded and Grafted Pecans

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Standard varieties guaranteed in every respect.

Get in touch with us before placing your next order.

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Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.

L. Majewski, Gen. Mgr.

FOR SALE

Grafting Wood of Stuart, Frotscher, Teche. MRS. M. L. RANDOLPH, Bayou Goula, La., "Blythewood Pecan Grove." 10-6

For Sale—45 acre Budded Pecan Orchard, 3 and 4 years old; Budded Pecan trees and Bud-wood; also improved Farms. C. W. Ransom, Houston, Tex. 8-4

For Sale—220 acres 25 miles south-east of Mobile, 1 1-2 miles to boat landing, 130 acres fenced and cleared. Buildings. 1500 Satsuma oranges, 600 pecans, 500 peach, 125 pears, 175 other trees in orchard in thrifty condition. 5000 trees in nursery. Dry, healthy location. J. S. GAYLORD, Magnolia Springs, Ala.

Budded and Grafted Hardy Northern Nut Trees for northern planting. Write for catalogue. INDIANA NUT NURSERY, J. F. Wilkinson, proprietor, Rockport, Ind. 9-4

For Sale—Four acres, 7 year old pecan orchard, originally purchased from Flint River Pecan Co., Albany, Ga. Will sell at a bargain. and arrange terms to suit purchaser. KARL JORGENSEN, 309 So. Cedar Str., Lansing, Mich. 9-1

Wish to Borrow \$1,000 on 20 acre pecan grove. Cost \$4,000 when set out five years ago. A fine grove. G. T. COWGILL, Waterloo, Ia. 9-2

Budded Pecans

PRICES REASONABLE. FINE PEACH TREES 8 CENTS. KEIFFER PEARS 10 CENTS. GET CATALOGUE.

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HARTWELL, GA.



Turn Stump Land Into Money

Don't let those stumps rob you of crop-money that belongs to you. Break them into firewood with

Atlas Farm Powder
THE SAFEST EXPLOSIVE
The Original Farm Powder

It's safe, easy, quick and cheap. Punch a hole, load, light a fuse, and the stump is out of your way forever. Dig ditches, make tree holes, blast the subsoil and shatter boulders with Atlas Farm Powder. Our free book, "Better Farming," tells how. Write for it now.

ATLAS POWDER CO.
Dept. NG25, Wilmington, Del.



WITH THE EDITOR AND HIS CORRESPONDENTS

FERTILIZER FOR PECAN TREES

Editor Nut Grower:

I have 100 pecan tree that I put out a little more than a year ago. I blasted the holes to set these in. They did fairly well last year. I want to fertilize these trees, and will thank you to write me just how much and what kind of fertilizer to use to each tree; also when and how to apply same.

E. BARWICK.

Braxton, Miss.

For the first two or three years after pecan trees are transplanted they may be fertilized to advantage by spreading the fertilizer on

the surface and digging or plowing it in. This may be done even at later stages of growth, provided the fertilizer is not put too near the tree where the feeding roots are at work.

But the better plan for fertilizing pecan trees which are well established is to fertilize well the crops which grow on the land, and the trees will get their share. Whether stable manure or commercial fertilizers are used, they should be applied during the winter so that the winter rains will dissolve the elements, and the trees will be prepared to use these as soon as the growth begins in spring.

As a general principle it may be said that anything which will make anything else grow will be beneficial to pecan trees. There is nothing better than stable manure, particularly at this time when commercial fertilizers are so high. A mulch of leaves, pine straw, or anything, which will thoroughly cover the ground and will add humus to the soil will be of advantage.

It can not be stressed too much that if maximum results are to be obtained from pecan trees, that they must be well cared for. It frequently happens that doubling the amount of fertilizer applied to a bearing tree will more than double the profits derived from it.

FERTILIZER INFORMATION WANTED

Editor Nut Grower:

We would like to know what the nurserymen of Georgia think is the best and cheapest fertilizer for pecan trees while they are in the nursery. We have found

WHOLESALE GROWERS OF

GRAFTED AND BUDDED PECAN TREES

SIMPSON Nursery Co.

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Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

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Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

that cotton seed meal and nitrate of soda are both good, but very costly. We also know that barn lot fertilizer is very fine. We will appreciate an early reply.

We are making a great success here growing a well rooted tree. We have seen trees from all over the South, and have not found anything that will come within 25 per cent. of ours. Our soil here is especially adapted to producing fine roots, but we have a seedling nut that we find does a great part of it. The demand for

this kind of a tree has been very great with us, so our stock has been practically sold out for some days—only a few odds and ends.

Please advise us the best you can about the fertilizer, and state how you like the looks of our trees. Best wishes for you and your paper. I like it.

R. W. FAIR.

[See article on this subject in last issue on page 173.—Editor.]

Big Reduction in Land Clearing Costs

The recent land clearing tests conducted by the University of Wisconsin have revolutionized methods and established conclusively much lower clearing costs per acre.

These tests cover the use of stump pullers and farm powder separately and in combination.

The leading kinds of stump pullers—hand and power—were represented. The dynamite used was



Red Cross Farm Powder

These tests proved the following important facts:

1st—The cheaper Red Cross Farm Powder will in most soils blast out stumps as well as the more expensive 30 per cent and 40 per cent grades.

2nd—The combined use of Red Cross Farm Powder and a stump puller is often the cheapest and the best way to clear land.

3rd—Properly placed charges fired with a blasting machine greatly reduces the amount, strength and cost of the dynamite required.

4th—Present high cost of dynamite is more than offset by the improved methods developed by the University's Demonstration.

As a result the average farmer can now clear his stump covered land at less cost per acre than before the war.

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Every farmer with stump covered land should know the full facts about this modern method of land clearing. Write today for

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and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

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is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

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THE NUT SPECIALIST
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Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

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C. FORKERT, Proprietor

Ocean Springs :: Mississippi

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

A GOOD RECORD

A correspondent writes: "During the winter of 1907-8 I bought ten Frotscher pecan trees. Eight of the ten lived. Last winter was the first crop of consequence I got from them. I gathered about 80 pounds and sold 50 pounds of them for \$25.00. This year I will get by the time I am through gathering

"During the winter of 1907-8 I bought ten Frotscher pecans trees. Eight of the ten lived. Last winter was the first crop of consequence I got from them. I gathered about 80 pounds and sold 50 pounds of them for \$25.00. This year I will get by the time I am through gathering them about 500 pounds. Five of the trees will yield at least 80 pounds each this crop.

"Have just finished gathering my pecans; and from one tree I gathered 109 pounds; and the next best had 101 pounds. These trees were set eight years ago last February.

"I would not have these trees cut down for \$200.00 apiece.

THE USE OF NUTS AS FOOD

"Of all the progressive changes brought about by the twentieth century none will be of more far-

reaching benefit to the human race than the progress made in scientific cookery. A knowledge of the laws of healthful living is of vital importance to every human being, especially to wives and mothers. Because of the general awakening in regard to healthful diet, societies have sprung up all over the world recommending the use of vegetable foods—especially fruits and nuts.

"Nuts like cereals, were an important article of food among primitive peoples. The wisdom of early times in the history of the human race are so limited that they cannot afford to lose what experience has taught others, or to overlook what has been found good and cheap. Among such, nuts have continued in use as one of the principal foods. From them has come to us a knowledge of many palatable nut preparations.

"Americans have usually overlooked the food value of nuts. They are general considered a diet accessory, a luxury, a food incidental to a substantial diet, something to be eaten out of hand at odd moments. Under such circumstances, their reputation for indigestibility is not to be wondered at.

"When, as in the pioneer days of this country, vigorous outdoor exercise was the common practice, food could be excessive and yet health, to a certain degree, maintained. But in these modern days with less physical activity, ill health is the invariable outcome when the digestive tract is overworked.

"To make a logical study of the food value of nuts one must approach the subject from the standpoint of their chemical composition.

Their use in nature would make them compact, concentrated foods as seeds are. Hardly anywhere in the food realm has more light been shed upon diet mistakes than in the use of nuts. The ed-

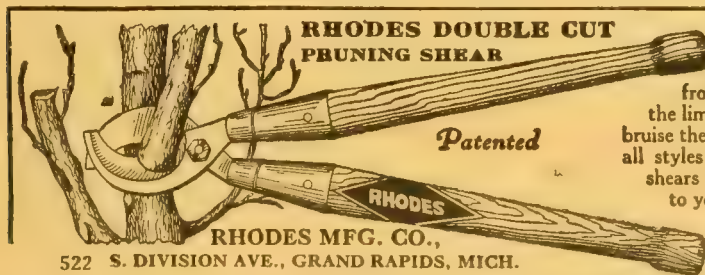
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PECAN TREES

Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

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The G. M. Bacon Pecan Co.

Box G DeWitt, Georgia

ible portion of nearly all nuts is very concentrated, highly nutritious food, containing little water and relatively large amounts of protein and fat. This would plainly indicate their use in combination with more bulky, less nutritious foods. In this simple and seemingly apparent yet generally disregarded fact lies the main point of this discussion.

"In protein content the peanut ranks among the highest with nearly 30 per cent., the butternut contains 27, the almond 21, the Brazil nut 17, the filbert 15.5, the walnut 18, the hickory 15, the pine nut 14.6, the pecan 12, the dry chestnut 10.7. Comparing these figures with meats we find that in most cases the amount of protein in nuts is considerably greater.

"The richest in fat is the pecan, with an average of 70 per cent. The Brazil nut, butter nut, filbert, hickory nut, walnut, almond and peanut contain upwards of fifty per cent.

"The flavor of nuts is dependent to a great extent upon the oils which they contain. In some there are in addition specific flavoring bodies. These nut oils may become rancid, hence the necessity of keeping nut meats in a dry cool place. Some nuts, as the chestnut and peanut, have a starchy flavor as well. In the roasted peanut the flavor is dependent upon the browned or dextrinized starch and other carbohydrates, as well as upon the oil.

"Much has been said about the indigestibility of nuts. If more attention were paid to their correct place in the diet, there would be less unfavorable comment along this line. Nuts are usually eaten at the end of a hearty meal after the appetite has been completely satisfied, or at other times when they are not needed. If nuts were more often regarded as an essential part of the meal

and were used as a substitute for part of the meat in the diet, there would be less difficulty with regard to their digestion.

"We, as a nation, eat far too rapidly and masticate imperfectly. Nuts of all foods require the most thorough mastication. For this reason some of the nut meals and pastes on the market are most valuable. Their fine division increases their digestibility, because both the demand for and

"Paste used by confectioners for candy making and in certain varieties of cakes are made of ground nuts and sugar. Almond and cocoanut paste are used for making macaroons and the rich cakes called by the Germans 'tortens.'

"Nut syrups are used in the soda water trade. The Turks make several products from walnut meats which are considered wholesome and palatable foods.

"Nut flours and meals are made from some edible nuts by blanching, drying and grinding. Some of these are used in the prepara-

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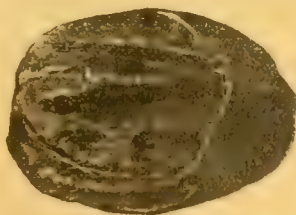
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Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

tion of certain special diets for the sick. Walnuts, almonds, and filberts which contain practically no starch, but are rich in protein and oil, are used in the diet of diebetics.

"One of the most extensive uses of nuts is in the manufacture of candies of various kinds. So familiar are the varied and numerous forms of nut confections that it is needless to enumerate them.

"A number of coffee substitutes made from nuts have been put upon the market. Peanut coffee and acorn coffee are the most common of these. Such coffees, in spite of the claims made for them, contain very little nutriment.

"Green walnuts and some other nuts are used for making pickles. Green nuts are more extensively used in Europe than in the United States. The various nut oils are practically pure fats and may be used like olive oil for salad and table purposes.

"Since nuts in general are rich in both protein and fat, they may be compared with meats as food, and used interchangeably with meat in the diet. Meat is already very high in price and if we analyze the reasons for this carefully we will see that we may expect a still greater increase in its cost in the future. With the growing knowledge of nut culture we may look for a much more extensive use of nuts as meat substitutes in the future. Rationally used they should constitute an integral part of the menu instead of supplementing an already abundant meal.

"From a standpoint of palatability, digestibility, food value and cost, nuts should be accorded a legitimate place in the diet as a staple article of food and might well be used far more extensively than at present."

Pecan trees keep on growing while you sleep, and do not stop very much while you loaf.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c. 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XVI

March-April, 1917

Number 2



A NEW age, an age of revolutionary change, needs new purposes and new ideas. . . We can no longer indulge our traditional provincialism. We are to play a leading part in the world drama whether we wish it or not. We shall lend, not borrow; act for ourselves, not imitate or follow; organize and initiate, not peep about merely to see where we may get in.

—WOODROW WILSON
September 2, 1916.

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WE WILL SELL IN
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Deliveries October 15th and
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JAS. D. EVANS, President

PRUNING PECAN TREES AT PLANTING TIME

The question of pruning pecan trees at planting time has been argued considerably ever since pecan trees have been planted in orchards. Many growers of pecans have held to the position that the trees should not be pruned at planting time. They stated in their experience that better trees were obtained if nothing was done to them in the way of pruning when planted. Others have followed the practice of cutting back the trees when transplanted after the manner of treating peaches and apples. This latter class reasoned from the principle that since a certain amount of the roots of the trees were removed in transplanting, the tops should be cut back as to balance up the relationship between the tree tops and their roots.

In 1912, 160 pecan trees were

(Continued on page 26)

The W. B. Dukes
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Moultrie, Georgia
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SHELL PECANS**

One million grafts and buds of Schley
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Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

VOL. XVI


WAYCROSS, GA., MARCH-APRIL, 1917

No. 2

SOIL-BUILDING NUT CULTURE

By A. S. PERRY

Read at National Nut Growers Convention.

 ESTERDAY'S ideas do not fit today's ideals. When conditions shift opinions must be adjusted accordingly. There was a time when the virgin resources of our country were so great that men made money in spite of themselves, but two hundred years of willful waste have brought us to the verge of woeful want, and today we stand face to face with the stern reality that outraged nature refuses longer to be cheated. Verily "The fathers have eaten sour grapes and the children's teeth are on edge." What was once a fairy land of flower gardens and fertile farms is today in many instances a barren waste of abandoned fields, overgrown with briars and scarred with gullies, all caused by the soil-robbing, land-skinning methods of the past. To reclaim this Paradise Lost is the problem that confronts the south today. To solve it we need ideas, big ideas, and big men with broad vision to execute them.

In this gathering of the leading horticulturists of our nation I am sure, are to be found men of sufficient caliber to overcome the lions in the way, and restore Dixie to her rightful place among the sisterhood of states, and as our snowy fields of cotton melt before the blighting touch of the Mexican boll weevil, great orchards of pecans will rear their majestic heads towards the skies as though proud of their royal lineage, and then shall the south again blossom like the roses, and become a blue-domed, sun-kissed, moon-bathed dream of beauty, and her purse filled with honest gold given in exchange for the queen of all nuts, the pecan.

We have a natural monopoly in the production of this splendid nut, but to make the most of our God given opportunity requires money, brains, and everlasting bull-dog determination.

The ideal system of nut culture has been sought by many, but found by few, and I would not for an instant pose as one of the favored few. So not as one who speaks with authority, but as a mere tenant by sufferance in the great field of horti-

culture, I will deem myself most fortunate if I can but handle my subject so as to stimulate your thoughts and provoke a discussion by you, for "In the multitude of counsellors there is safety."

A pecan orchard is an expensive proposition at the best for the first eight or ten years, and no doubt all of us have puzzled our brains in trying to devise an efficient yet economical system of orchard management. I frankly confess that this question has brought me to my wit's end more than once. These first years with all going out and nothing coming in, is the great bug-bear of our industry that has scared away many good men. The high cost of orchard maintenance is the Banquo's Ghost that must be laid before we can interest the small land-owner in the pecan growing. I do not claim to have solved the problem, but I am convinced that the average pecan grower's salvation for the first ten years lies in the crops grown between the trees. There are two classes of crops that are grown in a pecan orchard. First, those that rob the soil of moisture, humus, and fertility, and leave it poorer than it was the year before. Second, those that leave the land richer than it ever was before, that return humus to the soil and fill it with nitrogen, that priceless gift of nature. It seems foolish to ask an intelligent audience of the National Nut Growers Association "Which of these crops will you plant?" But we can all profit by studying this question.

It is sad but true that there are men who will spend considerable sums in planting a pecan orchard and then through carelessness or ignorance will so impoverish the soil by unwise intercropping that the trees become stunted, and they quit the game in disgust, branding the pecan industry as a snare and a delusion.

Now let us consider more specifically these crops referred to a moment ago. First, those that rob the soil. Perhaps the greatest robber of southern soil is cotton, for this reason the pecan grower

should renounce allegiance to King Cotton. The clean cultivation required by cotton leaves no vegetable matter to be turned into humus, its long season from March to January leaves no time for a winter cover crop. But the boll weevil has settled the cotton question, so we pass on.

Oats and bermuda grass have no place in a well kept orchard. I know that at least one very successful grower will take issue with me here, and I realize that I would make a rather sorry sight in attempting to argue any horticultural question with him, but facts are stubborn things. Now pecan trees have grown for this horticultural wizard in the midst of oats and bermuda grass, but they have not done so for my neighbors and I don't believe they will do it for you or me either; and even if he should attempt to prove his theory by showing his splendid trees, I can only wonder as to what magnificent proportions they would have grown had they not been so handicapped with small grains and grass. Potatoes, and in some sections tobacco, and perhaps other truck crops if highly fertilized, will return a handsome profit in money for the man, but unfortunately they will deplete the store of available plant food in the soil, and through all the coming years outraged nature will demand her pound of flesh, and levy a tax on the bearing quality of the trees. The man who rocked the boat or lit his pipe in the powder magazine is a modern Solomon, a very paragon of wisdom as compared to him who will so handicap his pecan orchard. Sweet potatoes are to be avoided for the further reason that they tend to prolong the trees' growing season until late in the fall and thereby increase the danger of winter killing.

Now let us consider the other class of crops, those that enrich the land as well as the man. I refer of course to the legumes, velvet beans, peanuts, Brabham and iron cow peas, beggar weed and the clovers. There is hardly an acre in all our southland that does not cry out for nitrogen, and since nature is carrying millions of this precious element above every farm, let us supply the connecting link and store it in our soil in an available form on the roots of leguminous crops.

Legumes are nature's wonder workers, the magician's wand which allows the farmer to take from his land and still leave it richer than before. By their systematic use our orchards will become like trees planted beside the rivers of water which bring forth their fruit in their season, a source of perennial pleasure and never ending profit, like the widow's barrel of meal and cruse of oil. While this is true, it is also true that the continual growing and removal of legume crops from the land will deplete the supply of potash, lime and phosphorus.

Of course German potash is not to be had at any price, but lime and phosphorus are comparatively cheap, and I have been told that cultivation will liberate nature's store of potash and make it available for the growing crops. Of course we all understand that the better plan is to feed the legumes to live stock and return the resulting manure to the land, but often times the conditions surrounding the pecan grower prevent this.

Up to date I have found no place for live stock among growing pecan trees. Even the well behaved family cow will bite off more in a minute than nature can restore in a season. Let us suggest, go slow on cattle raising if you must use the orchard for grazing ground. It is unwise for the pecan grower to plunge too deeply in stock raising, for some fine morning he may come to himself and agree that "fools rush in where angels fear to tread." For my own part, I have chosen the safer if less efficient method of plowing under the entire crop.

In my own orchard the trees are planted in sixty foot checks. In the middles are peaches in fifteen foot checks, reserving a strip on each side of all the tree rows for cultivation. I am following a system of leguminous crops that have already proven profitable to the land and the man. I have gone in for Brabham peas in summer and crimson clover in winter. Now, understand, I do not claim that Brabham peas and crimson clover are the ideal legumes for all pecan orchards. This is a question that each grower should study and answer for himself.

The peas are planted in drills and picked for seed, the vines being turned under in October. Then comes the clover, which is turned under in April to be followed by the same crop for three years. By that time I expect to have the soil filled with nitrogen and vegetable matter, and as the humus content of the soil increases ground phosphate rock will be substituted for acid phosphate, and a material saving thereby effected in the price of fertilizer. Lime is as essential as inoculation for legumes, and to this end I began with three thousand pounds of ground limestone per acre. In planting crimson clover in the fall of 1915 in Randolph county, Georgia, the land was broken flat with a turn plow, and then harrowed six times with a disc harrow, thereby pulverizing every clod and getting as fine a seed bed as possible, believing that "as thy seed bed is so shalt thy harvest be." The inoculation was furnished by the Georgia State Agricultural Department at a cost of twenty five cents per acre. Twenty pounds of freshly inoculated seed were sown per acre and immediately covered by a light drag harrow. A good rain fell the

next day and a perfect stand was the result. It made a splendid growth all winter, and by spring its millions of crimson blossoms made it a veritable show place. The cost per acre was: Lime, \$3.90, seed, \$2.40, inoculation, 25 cents, labor, \$3.00, making a total of \$9.55. For the crop just planted in October of this year slightly different methods were used which materially reduced the cost. No additional lime was used, and instead of turning over the land it was merely disked, the soil being in such a fine mechanical condition that it was unnecessary to use a plow. There was no expense for inoculation. The seed cost fourteen cents per pound and freight from Charleston, S. C. The cost per acre for this crop was: Seed, \$3.00, labor, 40 cents, making a total of \$3.40.

But what of results? Has it paid? A small corner of the orchard last year was in cotton and not planted to peas and clover. It is as easy to tell where the dividing line was as if it were fenced off. The trees are the same age, but altogether different in size, those in the clover having every appearance of being a year older. The torrential rains last summer washed away every public bridge in my county save one. The streams ran red with the life blood of Georgia-farms, but not a terrace in my orchard broke, and I am inclined to credit this to the delving roots of the clover.

I have about decided to shift from Brabham peas to peanuts as a summer legume—not that I have any fault to find with Brabham peas—but the

establishment of three peanut oil mills in my vicinity—one each in Cuthbert, Edison and Coleman—has staplized the peanut market and made it a very profitable crop—the growers this year realizing from \$20.00 to \$40.00 per acre net profit.


I will agree with any of you gentlemen who say that the velvet bean is the king of summer legumes for southern farmers, but is not adapted to my orchard, as its rank growth of vines would interfere with the peaches.

In conclusion, let us say that my pecan trees are my first and only love. I let nothing in the orchard, nor out of the orchard, interfere with their growth and development, and let me urge each of you to adopt the same policy. So plan your inter-crops that under no circumstances will they interfere with the pecans. No matter how promising the prospects, never hesitate to use the mower or the plow if the best interest of the trees seem to demand it.

And if I am addressing today a soil-robbing nut grower, permit me to suggest, with apologies to Walt Mason, "You've got it mixed, and you are headed wrong, but I've a field for cowpeas fixed and I must jog along. Just let me say before I go that nature's laws are just and that man stands a splendid show to get in debt or bust who tries to cheat the land he tends. Go plant some clover, beans and peas, and thank the good Lord that He sends to you such splendid crops as these.

CARE AND CULTIVATION OF PECAN TREES

By O. P. MEARES

 INVITE you to join me on a trip into the pecan orchards of the South and examine the trees.

Do we find the trees doing their best? Have we given the trees the opportunity to realize their best results.

Generally speaking—probably not. Is this the fault of the trees or man?

After a careful inspection of the orchards of the South, if we will go back to nature and examine, investigate the original home of the pecan trees, its natural surroundings, environment, and habits we find the fault or trouble may lie in us.

Pecan culture and the growing of large orchards is practically a new business, existing only in the last ten or twelve years. Without thought, study or investigation of the natural environments, habits and life growth of the pecan tree, most growers and others interested, jumped to the conclusion,

that pecan trees and orchards should be cultivated same as fruit orchards.

The idea has been, because peach orchards and orange groves were cultivated, of course, pecan orchards must be cultivated, too.

But is the custom generally practiced the proper and natural one for the pecan tree?

In the last year or two a good many growers have begun to believe otherwise.

In the judgment of many, we have all made the mistake of treating the pecan tree too much as a civilized tree and have not given it attention enough as a tree of forest growth. In the care and development of orchards throughout the South, at the present time, there are three systems in use and practice.

First—Cultivation, intensive cultivation.

(Continued on page 23)

The Nut-Grower

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Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



Nuts, particularly pecans, are certain to figure prominently in the high cost of living which now is so serious a problem. Those having bearing pecan orchards will not worry.

Peach and pecan growing is receiving much attention in Randolph county, Georgia; the shorter lived peach being used as fillers for pecan orchards. This is a good combination in sections suited to both. We surmise that our friend Perry of Cuthbert has a hand in developing the business.

Growing out of the action taken at the Jacksonville convention a greatly enlarged appropriation was obtained from Congress for investigation and control of insects and diseases affecting the pecan. Representative Park, of the Second Georgia district was influential in securing favorable consideration of the request of the Association.

Near the close of the last session of the Jacksonville convention the chairman of the committee on nomenclature reported in favor of the Blackshear Williams pecan on the grounds of priority of use of the name. This name was used by The Nut-Grower in designating the fine Jewett-Success cross produced by Mr. Forkert, of Mississippi. This creation was given to the public shortly before the death of Prof. Williams of Alabama, and his name was chosen for the new nut as a memorial to this distinguished horticulturist. At that time neither Mr. Forkert or the editor knew of any nut of the same name. Having received no infor-

mation that this matter would come up at the time it was reported, we were unable to establish, without reference to our files, the exact date when the name was first applied to the Forkert cross.

With the attaining of the growth of the pecan orchard to the extent of interfering with intercropping, the subject of the permanent treatment of the trees assumes increasing importance. The mulching of land rather than cultivation is advocated as nature's method for conserving moisture, which is conceded to be essential. This calls to mind the discussions of ten or more years ago when the grass mulch was ably advocated by a well known Texas horticulturist. One of the orchards under our direction has several acres so well stocked with Bermuda grass that tenants dislike to cultivate it. We wonder if this is not a fortunate condition, as we would like to have a place to pasture a flock of sheep and raise some spring lambs. If the sheep killing dogs can be excluded, there is reason to expect that sheep husbandry will be worthy of a trial as an orchard by-product.

The following letter from the Secretary of the National Nut Growers Association will be of interest to the patrons of The Nut-Grower. How to enlist the support of others is a problem which our loyal helpers can help us solve. Simply stated, the industry and its wonderful development has been accomplished and is being carried on by a comparatively small portion of those who are benefiting by the work of the Association and The Nut-Grower. If this dead weight of the "leaners" could be converted into "lifters," the beneficial results would easily be quadrupled.

Dear Mr. Wilson:

I want to thank you on behalf of the nut growers everywhere for your helpful interest in the business. Just the other day I read for the first time your article some time ago on the question of changing the name of the Association. I approve most heartily of your views and endorse them strongly. I can see no useful purpose to be served by changing the name.

You have had an up-hill fight of it, as many nut growers are not loyal enough to subscribe for a good paper. I think every one of them should subscribe, and not only help themselves, but thereby give substantial encouragement to a worthy enterprise.

Sincerely,

WM. P. BULLARD.

CARE AND CULTIVATION OF PECAN TREES

(Continued from page 21.)

Second - Cover crops - winter and summer legumes, little cultivation and no deep plowing.

Third - Mulching and no cultivation, no plowing whatever of any kind.

The first system, cultivation, is the more common custom, and more in general practice.

The second system, cover crops, the planting of both winter and summer legumes is now adopted and practiced by a few and is coming more into general favor.

The third system of mulching the trees in orchards is probably only practiced to an extent in Louisiana.

Which of these systems, has given the best results?

Under which, has the pecan tree done its best?

Reverting to nature, we find the answer. Also, the answer is found, satisfactorily proven and actually demonstrated in trees and orchards scattered throughout the South.

When we look into the natural conditions, environments and life growth of the pecan tree on its natural habit, we find the pecan tree thrives largely on its water supply, its root system is kept shaded, and well supplied with humus.

Pecans trees, to do their best, must have an abundance of water; they require a greater amount of moisture than is generally supposed.

Without the requisite and sufficient amount of moisture they will not make normal growth; in addition when in the bearing stage, they do not hold their fruit, causing the trees to drop their nuts and also the nuts do not retain their normal size.

These are natural facts existing all around us. So then, of the three systems, which is the best? Under these systems in order mentioned, the biblical saying, "The first shall be the last and the last first," seems to supply to pecan culture.

Whenever adopted, the mulching system has given the best results when properly carried out.

This due to the fact that mulching retains the moisture.

Trees kept properly mulched year in and year out thrive best.

This is proven and abundantly demonstrated in Louisiana where the best orchards are mulched and not cultivated—no plowing whatever. In Louisiana mulching the trees have given far better results than intensive cultivation.

The second system, cover crops, comes next in value.

Orchards continuously and properly planted in legumes, both winter and summer both gives

best results. Why, because, this plan retains more moisture than cultivation. It not only holds more of the water supply, but also puts humus into the soil, adds nitrogen to the soil and also keeps the ground cool and shaded which protects the roots from the hot summer suns. This system means only a little cultivation, only harrow and no deep plowing.

The first system, cultivation, intensive cultivation, does not retain as much moisture as the others; it robs the ground of all humus; necessitates the use of more commercial fertilizer. It keeps the ground bare and clean, which exposes the roots to the hot sun for the five months of hot weather; is also the most expensive plan of maintaining the orchard.

It seems therefore mulching is the best plan and to be preferred. In the small orchards I would recommend mulching the trees.

In large orchards, under a system of cover crops, both winter and summer perennial legumes, you can gradually build up to a mulching system. In a few years these crops will furnish sufficient mulch so you can adopt and practice the mulch system.

The cover crop system of both winter and summer perennial legumes is however recommended as the next best plan; as the trees are benefitted by more moisture, more humus, more nitrogen, more shade and better results thereby obtained over cultivation. This system to be effective should be kept up continuously from year to year.

For young orchards I advocate planting Sativa vetch or burr clover in the Fall and velvet beans or Lezpedeza in the Spring. For older or bearing orchards, I advocate the planting of perennial legumes; burr clover as a winter cover crop and Lezpedeza or beggar weed for summer cover crop. These crops furnish valuable food for stock.

In this section of the country, considering our annual amount of rain fall of late years, conditions and results have demonstrated that intensive cultivation and excess of fertilization are not the safest plan for pecan trees, especially bearing trees.

My experience and observation of pecan trees and orchards in this section of the South, leads me to say, that the health, growth, and bearing capacity of trees are governed and controlled almost entirely by the water supply.

Pecan trees do not do well, on lands where the sub-soil is hard and compacted, especially on hard clay sub-soil.

Many orchards no doubt, could be improved upon if the land was dynamited.

Finally, a word as to deep plowing in orchards. Deep plowing every year around the trees

must be determined to the tree. Why? because it tears up, breaks up the roots, destroys the little feed roots and therefore must check the growth and vitality of the tree.

Deep plowing year in and year out destroys a considerable part of the root system every year and thereby prevents the tree from making all of its natural normal growth.

This can be readily shown in every orchard where it is practiced.

In conclusion—my idea of an ideal pecan orchard would be under a system of irrigation.

If we would irrigate our orchards and lands and then properly feed the trees, we would then grow the very finest of nuts, always filled out, have early and prolific bearing and be sure of good annual crops.

If we then planted perennial legumes, winter and summer cover crops, the orchard could be converted into a stock farm and we would then have a combination pecan orchard and stock farm, which would make our orchard property much more valuable and profitable than it is at present.

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.



WITH THE EDITOR AND HIS CORRESPONDENTS

THE WILLIAMS PECANS

Editor Nut-Grower:

Mr. C. A. Reed, of Washington informs me that we must give up the name Williams for the pecan, cross of Jewett and Success, which you named in honor of Professor Williams, Horticulturist at Alabama A. and M. College, previous to his demise. Mr. Reed speaks of priority of Dr. Williams' pecan at Blackshear, Ga., but does not state any points which would establish priority. I am sure you did not know of any pecan named Williams at the time you named the Jewett and Success cross. You would not have given that name if you had had any intimation of there being a pecan named Williams.

Now, what are points of priority? If you know all about the circumstances, points, facts and interest involved, please advise me why should you, or "we," retract from our privilege? The pecan you named is of known parentage (which I believe is not the case with the Blackshear Williams), and the pecan was named after a good man, and until I know more about the facts and reasons of the Blackshear Williams pecan getting priority I am not willing to drop the name you proposed and gave to my cross of Jewett and Success. The nut is a good one and was named after a good man.

We have been to such terrible disadvantage on account of the two disastrous storms, i. e., September, 1915, and July 5th, 1916, that we have not anything to brag about. The crop of 1915 was half lost, and what was on the trees last year was all lost.

I grafted over an orchard row of nine trees of Delmas in one row, and seven in another with Williams and the trees did splendid. All of the sixteen trees except two were wrecked by the storm. The growth was most too hasty to stand much strain. Losses of so many years' labor in such short time are hard to bear, but we have to smilingly get about and make the loss good.

Dr. Williams' pecan, it appears to me from what I saw of it (he gave me two pecans of it as sample last year at Albany), is in the class with the Van Deman, if as good. The Van Deman is one of the best flavored pecans. But be this as it may, if you were first in naming a pecan Williams, no matter what the origin, it should stand. Unless you have good reasons, I cannot see why you should want to recall your sponsorship on our Williams pecan. Be good enough to write me in regard to it; give me the facts, if you can, why Dr. Williams' pecan should be recognized as a prior product to our Williams, and greatly oblige.

C. FORKERT.
Ocean Springs, Miss.

TO KILL BORERS

Editor Nut-Grower:

For the benefit of pecan growers bothered with pecan borers, I am enclosing a trunk wash formula which I have used with success in combating this pest.

Holk's Pecan Borer Remedy

Stir 1 1-2 pounds of sulphur in water to make a good paste; put 6 pounds of lump lime in a large pail, add water enough to slake it to creamy consistency and add the sulphur paste as soon as you

The

Williams

Pecan—

A Recent Discovery

COMBINES MANY DESIRABLE QUALITIES. IT HAS SIZE, THIN SHELL, AND A PLUMP KERNEL, IS A SPLENDID CRACKER AND HAS AN EXCELLENT FLAVOR.

The tree is a vigorous grower, a regular and abundant bearer and is resistant to disease and insects.

Write for free leaflet giving the story of pedigree and record of bearing as written by the editor of The Nut-Grower.

DR. W. P. WILLIAMS
BLACKSHEAR, GA.

In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

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F. T. Ramsey & Son
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put the water in, so that the sulphur can be boiled into the mixture by the slaking of the lime. Also add about a pound of salt.

Cover to retain the heat and let it stand several hours or until you are ready to use it; then add one quart of kerosene to the mixture. Mix by using two buckets, pouring it from one bucket to the other about ten times. This makes a yellow-colored wash, but it will turn white in about half an hour after it has been applied to the tree trunk.

Use a large paint brush and

Berckmans' Trees and Shrubs

Are grown by specialists of long experience, who know the requirements of Southern soil and climate.

Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

Catalogue for the asking

P. J. Berckmans Co.,
FRUITLAND NURSERIES
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Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

Pecans—A Money Crop

The largest pecan acreage in the United States is planted along our lines in Georgia and Florida.

As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

Along with general farming and stock raising the pecan is proving very profitable.

Write us as to land, prices, and location for such farms.

Atlantic Coast Line

"The Standard Railroad of
The South"

WILBUR McCOY, A. & I. Agt.
Jacksonville, Fla.

give the trunk a good heavy coat. The borers will back out, owing to the disagreeable sulphur odor, and the mixture will kill them. After drying it will prevent any others from entering the trunk.

The above mixture can be used at any season, but two applications a year would be of great benefit—in early fall and in the spring. It can also be used on other trees as well as the pecan.

ARTHUR HOLK.

Magnolia Springs, Ala.

WHAT ADVERTISING DOES

Editor Nut-Grower:

Since advertising in The Nut-Grower we have had so many calls for nut trees and the sales have been so good that we are now almost entirely sold out and for that reason, we find it advisable to discontinue our advertising at present. Generally I do not believe it good policy to quit advertising, even after one is sold out, but we are moving our nursery operations from Indiana to Bowie, Md., and for that reason do not have very much of an idea how many trees we will have to put on the market next fall.

If we were sure that we would have a good fall stock, we would carry the ads and try to get the inquirers to let us book their orders, but I very much doubt whether it would be very good business policy to do that with the uncertainty of trees to fill the orders next fall.

We have been very much pleased and surprised at the result from advertising and also at the interest that has been shown throughout the country. It shows that the public are beginning to realize the advantage of setting nut trees for shade and ornamental purposes instead of the numerous worthless trees that have been so generally used heretofore.

T. P. LITTLEPAGE.
Washington, D. C.

PRUNING PECAN TREES AT PLANTING TIME

(Continued from page 18)

selected for making a comparative test of this question. These were 5 to 6 foot trees. They were planted in a sandy loam soil, near Lumber City, Ga., being a part of a large planting at this place. Eighty of the trees were cut off 4 feet from the ground immediately after planting. The remaining eighty trees were unpruned. Each year since that time notes have been taken on these trees. Both blocks were treated identically as to cultivation, fertilization, etc. The trees are now five years old, and the conclusions from this test are as follows:

(1) Concerning the possibility of living after transplanting, no difference was noted between the trees of the two blocks. (2) Cut back trees showed a slight advantage in the amount of growth made during the five years. (3) Trees that were cut back at planting time after five years of growth showed unmistakably better heads. (4) Crotches are markedly absent on the trees that are cut back and very prevalent on the others. (5) The branches are better placed on the trees that were cut back.

In summing up this question of cutting back pecan trees at planting time, from the test that was made at Lumber City, it seems there are no disadvantages obtained from the cutting back of these trees. On the other hand, trees with better heads were obtained through the cutting back process. Especially should it be noticed that the absence of crotches is of considerable importance. Crotches in pecan trees split apart very readily from high winds or during a time when the tree is laden with nuts.

The pecan tree is rather slow to make a growth the first year

after transplanting. If one will notice a transplanted tree, it will be found that there are prominent buds beginning at the top of the tree and proceeding down its trunk. These buds are closer together near the top than farther down the trunk. Generally speaking, they are spaced wider and wider as one goes from the top downward. By cutting off this top where the buds are very close together, one spaces the main limbs farther apart and better. Furthermore, by removing some of the dormant buds the struggle for existence among the buds themselves is lessened.—J. Wm. Firor, Junior Professor Horticulture, Georgia State College of Agriculture.

FOR SALE

Grafting Wood of Stuart, Frotscher, Teche. MRS. M. L. RANDOLPH, Bayou Goula, La., "Blythewood Pecan Grove." 10-6

For Sale—220 acres 25 miles southeast of Mobile, 1 1-2 miles to boat landing, 130 acres fenced and cleared. Buildings. 1500 Satsuma oranges, 600 pecans, 500 peach, 125 pears, 175 other trees in orchard in thrifty condition. 5000 trees in nursery. Dry, healthy location. J. S. GAYLORD, Magnolia Springs, Ala.

Budded and Grafted Hardy Northern Nut Trees for northern planting. Write for catalogue. INDIANA NUT NURSERY, J. F. Wilkinson, proprietor, Rockport, Ind. 9-4

Budded Pecans

PRICES REASONABLE. FINE PEACH TREES 8 CENTS. KEIFFER PEARS 10 CENTS. GET CATALOGUE.

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and the names of three fruit growers and you will get a trial 12 months subscription to the AMERICAN FRUIT-GROWER at one half the regular price of 50c.

A monthly publication devoted to fruit growing, edited by practical orchardist and published in the heart of the Appalachian fruit belt.

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Budding Tool

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A popular tool for budding Pecans, Hickories, Walnuts, Chestnuts, Persimmons and all other trees.

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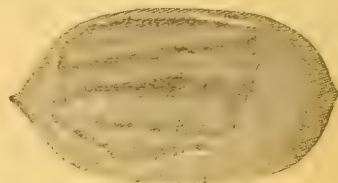
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Our Specialty is
growing wellrooted budded and grafted trees of best varieties.

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Write for prices.

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Thomasville, :: Georgia



The Pecan Business

In a concise booklet—FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.
B. W. STONE:: Thomasville, Ga.

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

GEORGIA-FLORIDA PECAN GROWERS CONVENTION

Secretary W. W. Bassett announces the following program for the meeting of the Georgia-Florida Pecan Growers Convention at Thomasville:

Wednesday, May 30th, 10:00 A. M.

Call to Order.

Invocation, Rev. Robert S. Sanders.

Address of Welcome, Mayor M. M. Cooper.

Response to Address of Welcome, W. C. Jones, Cairo, Ga.

President's Address, C. A. Simpson, Monticello, Fla.

The Nut Case-bearer and Its Control, J. B. Gill, Monticello, Fla.

Experience in Handling Pecan Rosette, S. M. McMurran, Washington, D. C.

The New Pecan Project, C. A. Reed, Washington, D. C.

Question Box.

Wednesday, 2:00 P. M.

How to Develop an Orchard to the Bearing Age, H. C. White, Putney, Ga.; Charles Puckett, Putney, Ga.

How to Cultivate the Bearing Orchard, Col. C. A. VanDuzee, Cairo, Ga.; B. W. Stone, Thomasville, Ga.

A Talk, E. Lee Worsham, Atlanta, Ga.

How to Avoid Winter Killing, W. W. Bassett, Monticello, Fla.

Question Box.

Wednesday, 8:30 P. M.

Banquet at Tosco Hotel, followed by Round Table—Report on the Behavior of the Leading Varieties.

Question Box.

Thursday, 9:00 A. M.

The True Merits of a Paper Shell Pecan, L. A. Nevin, Atlanta, Ga.

Some Pecan Statistics, J. M. Patterson, Putney, Ga.

Will the Pecan Business Be Overdone, J. B. Wight, Cairo, Ga.

Report from the Nation Pecan Exchange, W. P. Bullard, Albany, Ga.

Miscellaneous Business.

Report of Standing Committees.

Selection of Place of Next Meeting.

Election of Officers.

Information

A new and prominent feature of the Convention will be the Banquet given at the Tosco Ho-

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Also 1000 acres in nursery. We grow a general line of nursery stock, suitable for the South. Plant more trees and less cotton. Write for illustrated catalog.

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Budded and Grafted Pecans

WHOLESALE AND RETAIL

Standard varieties guaranteed in every respect.

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MONTICELLO, FLA



STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right.

Chas. Crossland, Bennetsville, S. C.

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A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

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and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over

your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES
THE NUT SPECIALIST
Lancaster, Pa.

Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

Ocean Springs :: Mississippi

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

tel, at 8:30 P. M. As this will be served at only one dollar per plate, it is hoped that every one attending the Convention will be present. The committee has added some very interesting features to the Banquet Program which will insure a most enjoyable evening to all.

No regular automobile ride will be given, as previously, but provision will be made for parties of two or more desiring to visit the different pecan groves and special points of interest on the afternoon of the second day.

All sessions of the meeting are open to the public and will be held in the City Hall, second floor.

Every one interested in nut growing is most cordially invited to be present.

Committees for Current Year STATISTICS—W. P. Bulard, Albany, Ga.; C. S. Parker, Thomasville, Ga.; L. N. Hansford, Americus, Ga.; A. C. Snedeker, Waycross, Ga.; E. B. Dukes, Moultrie, Ga.; W. W. Bassett, Monticello, Fla.; H. G. Cannon, Cairo; R. C. Shaw, Quincy, Fla.; H. H. Simmons, Jacksonville, Fla.

EXHIBITS—B. W. Stone, Thomasville; W. C. Jones, Cairo; H. C. White, Putney.

MARKETS AND MARKETING—C. A. VanDuzee, Cairo; B. W. Stone, Thomasville.

NEW HORTICULTURAL SOCIETY

The peach and pecan growers of Randolph county, Georgia, met in the county court house in Cuthbert recently and formally organized the Randolph County Horticultural Society, with the following officers:

President, A. C. Perry, Cuthbert, Ga.; Vice-President, T. E. Shaffer, Cuthbert, Ga.; Secretary, Mrs. Hugh Porter, Cuthbert, Ga.

Professor J. William Firor, of the State College of Agriculture,

Ocean Springs Pecan Nursery

Season 1917-18

Will be pleased to book orders now for Grafted Pecans

No Seedlings
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PECAN TREES

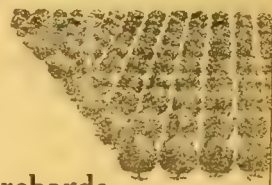
As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.



Fine
Pecan
Trees



And Fine Orchards

Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success. Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

Inter-State Nurseries

C.M. Griffing & Company
Macclenny, Florida

Pecan Trees

Satsuma Oranges

Other Citrus Trees

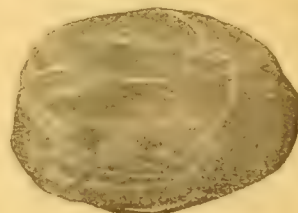
Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**

Box 21.

Macclenny, Fla

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

WHOLESALE
GROWERS OF

GRAFTED AND
BUDDED
PECAN TREES

SIMPSON
Nursery Co.
Monticello, Fla.

ROOD PECAN GROVES

Albany, Ga.

Pecan Trees, Pecan
Nuts, English Wal-
nut Trees

Write for Prices

C. M. Rood, President

was present and spoke interestingly on peach culture, covering the technical phases of the subject thoroughly. Mr. W. V. Reed, Assistant State Entomologist, spoke on the diseases and insect pests of peaches and pecans. Many questions were asked the speakers, which they readily answered.

Horticulture in Randolph county is on a decided boom. This year's plantings will be about 250,000 peach trees and 5,000 pecan trees, and the Randolph County Horticultural Society will no doubt prove a material factor in further development along this line.

The next meeting will be in Cuthbert on March 5th, when Professor H. P. Stuckey, of the Georgia Experiment Station, will be the principal speaker, his subject being "Pecans," with special reference to varieties and cultural methods suitable for South Georgia.

BOOKS AND CATALOGS

Facts about Georgia is a unique, finely illustrated book of about 300 pages compiled and edited by Louis N. Geldert, and published under the auspices of the Georgia Chamber of Commerce, C. J. Haden, President, Atlanta, Ga. Price \$1.00

The descriptive catalogue of the Turkey Creek Nurseries, McClenny, Fla., a handsomely illustrated pamphlet of 40 pages listing a variety of trees and plants. Pecans and citrus fruits are leading lines with this well known firm.

Griffin's catalogue for 1917, from the Port Arthur, Tex. branch will be found a great help to those planting for orchards and the beautifying of homes and grounds.

The seed Annual of the St. Louis Seed Company for 1917



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The 35th Annual Catalogue of J. A. Bauer, strawberry breeder, Judsonia, Ark., is replete with information on varieties.

Maryland Nut Nurseries, Bowie, Md., Littlepage & White, proprietors, have a pamphlet, of particular interest to the central and northern pecan growers. Copies can be had on application by mentioning The Nut-Grower when making request.

The Storrs & Harrison catalog for 1917 is in keeping with many previous issues in helping farmers and orchardists in keeping abreast with desirable plants and seeds. Painesville, O.

Pecans to the Front is a four page reprint from the Montgomery Times by Mr. J. B. Wight of Cario Ga. The writer presses the importance of crop diversification and shows how well this nut fits into the general farm and live stock program. Our subscribers' request for copy will have prompt attention.

GARDEN GUIDE

Although there have been a great number of garden books published, the Garden Guide or The Amateur Gardener's Handbook should just fill a present need.

In the present stress of high cost of living, far more attention than ever before is being paid to the garden—in fact, 1917, it is claimed, is going to be a Garden Year beyond compare; at no previous time has the importance of the home vegetable garden been forced upon the attention of the people as is being done now.

Throughout its pages expert

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Waycross, Ga.

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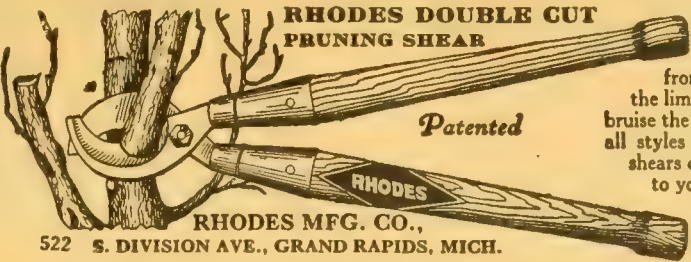
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veteran gardeners tell the amateur in remarkably simple, easily understood language, how to plan, plant and maintain the home grounds, suburban garden, or city lot; how to grow good vegetables and fruit; how to raise beautiful flowers; how to take care of lawns, porch plants, window boxes, etc. The book gives the How, the When, and Where—from the purchase of the proper tools to reaping the harvest, and 1001 other points. It is of interest to every man or woman interested in gardening, regardless of the amount of land at their disposal.

GARDEN GUIDE consists of 256 pages, and numerous illustrations, these selected not for picturesqueness, but as teaching examples, there being a reason for each and every picture presented. A charming cover in four colors depicts a flower garden and lawn view any garden lover would be proud of.

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PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson: a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XVI

May-June, 1917

Number 3



SOME say that the age of chivalry is past. The age of chivalry is never past, as long as there is a wrong left unredressed on earth, and a man left to say, "I will redress that wrong or spend my life in the attempt." The age of chivalry is never past so long as men have faith enough in God to say, "God will help me to redress that wrong; or if not me, surely He will help those that come after me. For His eternal will is to overcome evil, with good."—Charles Kingsley.

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GROWING PECAN NUTS

The production of pecan nuts in the United States more than trebled between 1899 and 1909 and, according to the latest census reports, the crop is now valued at nearly \$1,000,000. Pecan trees, in fact, have been planted on such a large scale in the last few years that in a new publication of the department, Farmers' Bulletin 700, by C. A. Reed, it is stated that it seems probable that the pecan nut is destined to become the most important of all our nut-bearing trees.

Few pecan trees are found north of the latitude of lower Virginia, but from there to the Gulf and as far west as Texas, Oklahoma, and a part of Kansas the tree has been already introduced into most of those state in which it was not native. The most extensive plantings have taken place in southern Mississippi, Alabama, and Georgia, in

(Continued on page 39)

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Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

VOL. XVI

WAYCROSS, GA., MAY-JUNE, 1917

NO. 3

HOW TO AVOID WINTER-KILLING

By W. W. BASSETT

WHEN this subject was assigned, the program committee either greatly misunderstood it, or the capacity of the writer; for I stand here before you, neither to claim that I can avoid this condition, or that I am going to tell you how, entirely. I will try to explain what we mean by "Winter-killing," its cause and effect, its extent and some of the preventative measures.

Winter-killing, or winter-injury, of pecan trees is a sudden contraction and breaking down of the cell walls of the soft bast tissues near the collar, or lower body, due to a sudden fall in temperature to below the freezing point, usually, and resulting in the death or severe injury to that tree. The outer bark is seldom split, as is the case with many trees, and the injury may not be detected until several months afterward. The close observer, however, can soon detect the injury by making a small oblique incision with a sharp knife, through the outer bark and cambium layer. This should be made on the south side of the tree, close to the ground, as I suppose the warmth of the sun has made this side more susceptible, and here, too, the cell walls and protoplasm are more quickly discolored. The injury is easily detected by the brownish streaks, in severe injury the whole inner bark soon turning brown. As spring approaches, the sap gives off a sour odor and the discoloration extends upward often showing in the branches before the tree dies. This sudden fall of temperature need not necessarily be below the freezing point, as damage has been done in sections where no freezing temperature was recorded through all the winter season. However, I am convinced the greatest damage occurs during sudden freezing temperature following several weeks of warm weather, as I will illustrate later on.

Immaturity of the active sap wood may be laid down as the first and greatest cause of winter injury. Research work at the University of Missouri, and other stations, has shown that the wood at the base of the tree reaches maturity more slowly

than the wood of the branches and twigs. Thus, this is the point where injury first occurs. This immaturity of the wood may be due to late cultivation, late fertilization, over-stimulation with too much stable manure, or other highly nitrogenous fertilizer. Cultivation and fertilization begun after an oat crop may prolong the growing season too late. Warm moist falls are apt to keep the trees growing too late with the best of care before hand. Poor air drainage and any condition that will cause cold to settle over any particular piece of land may be the cause of the injury. Trees on the south side of large pieces of timber are usually warmed up too early in the spring and are caught by late cold spells. Web-worms and other insects that feed on the foliage in late summer, or early fall, will cause the trees to put on new foliage and late growth, thus making them very susceptible to winter-injury. Winter-injury is found to take place most often on the light sandy and sand loam soils, they being the first affected by the extremes of temperature and moisture conditions. Trees planted on newly cleared land are most sure to be affected, more or less, any winter, as they have fed on too much nitrogen, making a quick sappy growth; here the sap lacks sufficient density, the cells having grown too large for proper maturity. There are probably many other causes that time and experience will show, some of which are doubtless more important factors than the ones we are now considering.

Trees from one to ten years old are affected, but is more general among trees from two to five years old. Injured trees are the first to show swollen buds in the spring and the first to leaf out, as compared to other trees of the same variety, except in severe cases where the tree is killed before growth starts. As growth begins in the spring, injured trees may be detected by raised dots and pimples on the bark of the bodies, the new growth is a pale yellow and less vigorous in appearance. By early May the trees begin to wilt, the twigs and

branches have a dark shriveled look and are dry and dead almost as soon as the early growth dies. This spring growth is due to stored energy in the tree itself, and is not taken from the soil. The injury may not cause death until the second spring or the tree may partially, or wholly, recover from the effects. Many more trees are injured than we have any idea, but from my observation I believe that from forty to sixty per cent., partially, or wholly recover. During this stage of recovery, the older trees are very often infested with shot-hole borers and other insects, the partly sour sap being a great attraction to them. All varieties are about equally affected, judging by the reports received from the different pecan districts, but my observations are that Van Deman and Moore are more susceptible than the other varieties. Even seedlings are quite often injured and killed, as was the case in this section the past winter. I have never seen seedlings more than two inches in diameter killed, however. As before stated, it is my belief that the greatest damage is done during severe cold snaps following warm spells in late fall, or winter and will illustrate as follows: The fall of 1914 was warm and moist, nursery stock and grove trees did not mature their wood at the usual time, late growth was made until finally on Nov. 19-20th, a strong wind with fall of 40 to 50 degrees F. to a freezing temperature took place in a few hours. Large orange trees and most all citrus nursery stock was split open and killed out right. The damage to pecan trees was not so quickly apparent, but resulted in thousands of nursery and orchard trees being killed over north Florida and south Georgia. Before this very little was known about winter-killing in Georgia. Some damage had been caused in the Monticello section a year or two previous, whereas now more or less damage is being reported each year.

The second instance of freezing temperature causing most damages occurred this past winter during the freeze of Feb. 2-5th. The weather previous had been warm for two or three weeks, probably causing considerable sap activity, even in trees that were well matured the previous fall. Again a sudden change of 50 to 60 degrees F. took place and remained below freezing for several days, resulting, together with previous fall injury, in the greatest loss being reported that has yet occurred.

We may well stop and give serious consideration to so dangerous a foe; it is time we were enlightened along this line. It seems to me that our state experiment stations and colleges should be sending out literature and information to guide

and help the young orchardist along these lines.

A grower writes me from southern Mississippi that several orchards in his section lost from 40 to 60 per cent. of their trees this past winter. Another grower in southern Alabama writes he lost one hundred six year old trees on forty acres. What were those trees worth if they could have been saved? A grower in the Albany district writes that he lost 15 per cent. of 2,000 trees, and how he could have prevented it is still a puzzle to him, as no commercial fertilizer was used and no late cultivation given. Now listen! One of the prominent orchardists in the same district says that the average minimum loss to be considered, even when all precautions, in the light of our present knowledge, were taken, was about eight per cent. last year in a block of fifty acres of five-year-old trees. Cairo district reports serious damage—more than usual the past winter, and says it is coming to be one of the big things in pecan culture to be considered. Waycross district reports little or no loss. Middle north Georgia and Athens sections report practically no damage for the past five or six years. Monticello, Florida, section reports considerable loss, but not as great as in the fall of 1914. Certain soils and locations show a high per cent. of loss, whereas large acreage handled by the same men show only a very small loss.

In a recent letter from Prof. Firor, Athens, Georgia, my attention was called to the fundamental principles of plant physiology as they relate to the question of winter-killing, which are as follows:

1. The most important feature affecting the hardiness of plants is maturity. Plants that mature thoroughly just before the winter season will withstand more cold than those which have only partially matured. Plants which have had a long, healthy, vigorous growing season have a greater tendency to go into winter fully matured than those which have undergone checks during the growing season.

2. That part of the root system nearest the surface of the soil is more resistant than roots farther away.

3. The whitewashing of the trunk and twigs of trees keeps down the temperature during warm days by reflecting heat that would be absorbed by the dark pigments.

4. There is a relationship between sap density and the temperature at which trees are killed. The greater the density the less likely the wood is to be killed.

5. Light, dry soils freeze deeper than heavy soils which retain their moisture better.

As there have been practically no experiments made in this phase of pecan culture, it would seem advisable to draw conclusions from these basic principles; then testing out the correctness of such conclusions by carefully made observations we would come nearer being correct in steps taken for preventing winter-killing in the future than we would if we merely floundered around among experiences. But unless we wish to make careful experimentation along these lines, allow me to suggest that we formulate a system of cultivation and orchard management based on our present knowledge of winter-killing, as the use of any single preventing method might be completely counteracted by the failure in not using other preventative steps. Such a system, subject to crop adaptation, might be outlined as follows: Cultivation should begin in the early spring and continue until the last of July or first of August, as we want to continue to carry on all operations so necessary in promoting strong, healthy tree growth, only leaving off such practices as may conflict with proper maturity of the trees in the fall. All high grade commercial fertilizer, cotton seed meal and stable manure should be applied not later than April 1st, if used in any quantity, thus giving plenty of time for their stimulating effects to be over by the early autumn. Repeated harrowings should be given through the usually dry months of April and May, then plant to peas, peanuts, or some other crop needing cultivation, and regulate the plantings of these crops so that the cultivation can continue to the first of August, if possible. The cultivated crop reaching its greatest growing period late in the summer would tend to take up some of the moisture, causing the trees to lessen (but it is not desirable to stop) their growth, thus producing smaller and more hardy cells.

It has been the prevailing theory that winter-killing largely resulted from immaturity of the trees in the fall, and if this be guarded against as much as possible, man could do no more; but I want to advance the theory that much damage is done in the late winter and early spring as well. Trees that enter winter in perfect maturity may be killed before growing season by a sudden change in temperature following long warm spells that cause the early rise of sap, particularly if moisture be present in any degree. This more particularly applies to soils that warm up quickly than to those that do not. We should be able to check the damage at this season by the use of winter cover crops; such as burr clover, crimson clover, rye, oats, etc., to be pastured or plowed under later on. These crops would shade the soil, use up surplus moisture, and hold the soil at a more

equable temperature by preventing the penetration of either heat or cold to any extent. As it is a common practice in many sections of the pecan belt to whitewash the bodies and lower branches of the trees during March or April for the protection from borers and other insects, I suggest that this be done early in January, or as soon thereafter as the weather may turn warm for a week or more. This earlier application will serve the original purpose practically as well, and it will do much toward keeping the trees dormant through a longer period.

The above are some of the main preventative measures applicable in a general way. Each section, however, has its own peculiar conditions to be met, and after all, 'tis for the individual grower to work out such practices as will best suit his conditions.

In making new plantings, do not get the idea that every acre over large tracts is equally suited to the pecan. Avoid the dry sandy ridges as much as possible. Do not plant on newly cleared land for two or three years, or until other crops have been allowed to remove the stimulating effects usually found on such soils.

COST OF CLEARING LAND WITH DYNAMITE

Mr. Chas. Moser, a farmer near Rockford, North Carolina, had a lot of stumps that were in his way. He thought he could not afford to have them taken out. He knew that I had had considerable experience in blasting stumps on my own land, so he asked me to blow a couple of his so that he could see what it would cost.

I did it, and he decided to buy a case of 40 per cent. dynamite and try it himself. Before this was entirely used up he sent for another and ended up by clearing four acres. When that was finished he decided to clear four more, as he found that the cost was a great deal less than he expected it would be.

Mr. Moser kept very careful record of the cost per stump to clear the first four acres. According to his figures, cost averaged $15\frac{1}{4}$ cents per stump. In all, 150 pounds of dynamite, 375 caps, 12 electric blasting caps and 550 of fuse were used. In his cost figures, he also included the wages of a man that he hired to help on the work.

After the work had been finished, Mr. Moser told me that he considered that the clearing had not cost him a cent. In fact, he calculated he had made money by doing it. In other words he would not be willing to sell the pine stump wood which he purposes to use for fire wood for the price that

(Continued on page 41)

The Nut-Grower

Published monthly by The Nut-Grower Company

Entered as second-class matter November 20, 1911, at the post office at Waycross, Ga., under the act of March 3, 1879.

Subscription Rates

In the United States and Mexico, \$1.00 per year; in Canada and other foreign countries, \$1.12.

No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



Aside from the few towns in the locality of the several groups of commercial orchards, there are many towns and cities in the pecan territory that will take at remunerative prices practically all the pecans now being produced in the Southeast, if simple business methods are adopted to encourage their use by showing the superior food value of nuts. The high cost of living is getting up to the point where nuts can be classified as a staple food rather than a luxury and will compete with other products as to price.

It is well to note conditions in foreign countries, which have for years been sending great quantities of almonds, walnuts and chestnuts to this country. It is not from commercial orchards that these supplies are gathered, neither do they come from natural sources like the pecan from Texas, where the harvesting of the crop is the only expense attending its being placed on the market. It is the peasantry of such countries as Spain and France, where every cottage and shaded highway has a few trees, that make up the shipments which go out to this and other countries. Already in Southeast Georgia there is scarcely a well developed farm but has a few trees or a small orchard of pecan trees. It is true they are largely seedlings and indifferent bearers and the product used largely for home consumption, but thousands of pounds are gradually finding a way to local markets.

At a matter of information, we may congratulate ourselves and patrons in overcoming to an encouraging extent certain difficulties which have beset our pathway for a number of months past.

While four double numbers have been used to bring delayed numbers out, the July issue will resume the regular monthly program, as well as begin the advocacy of new measures and plans which existing conditions have made desirable. We have actually grown away from the things that have dominated the activities on which we have relied for the limited measure of support received for the past fifteen years; so we will put into operation, as circumstances permit, such special features as may promise to be helpful in serving the public, while extending in different directions allied lines for profitable use by the publication.

In our January-February issue we spoke editorially on pecan publicity experiences and informed the public in part as to why our service, as operated with Nut Notes, was discontinued. Other results, however, followed than the remedying of the temporary difficulty of supplying pecan trees. There has been a gradual falling off in attendance at the meetings of the National, and also of the Georgia-Florida Pecan Growers Associations. No new organizations have been formed, while efforts directed in channels of particular interest to the commercial orchards and the marketing problem—which, by the way, is being solved in unexpected ways—has caused many to lose interest in these bodies. In our new publicity move the general farmer, the local produce dealer and the commuter who have homes to beautify and make profitable will have deserved attention.

It does not follow that we will abate in the least the established policy of The Nut-Grower in serving the industry as a scientific, practical and horticultural exponent of nut culture in general, and of pecan culture in particular, in giving attention to the commercial and industrial elements of the business which are now in operation, for these things simply grow out of the work and experiences of the past few years. Of course, we are only on the threshold of greater things to come, but we see no reason for not improving the opportunities for business in which we have had a regular and influential part in creating. We are not making promises other than to serve the industry in ways we regard as commendable, and in continuing to merit the loyal support extended us by a portion of those who have been direct and indirect beneficiaries of our labors. Incidentally, we may mention that our campaign for new subscribers and greater advertising patronage, which goes into operation soon, will be significant in results in several ways, which will be mentioned later.

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

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Standard varieties guaranteed in every respect.

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Summit Nurseries

MONTICELLO, FLA.

GROWING PECAN NUTS

(Continued from page 34)

northern Florida; and to a lesser extent in Louisiana. The tree, however, does not thrive in mountainous sections or in lowlands where the water stands on or near the surface of the ground for considerable periods. A deep, fertile soil sufficiently porous, to admit of free root growth, and well drained—but by no means dry, is the best adapted to pecan culture. It is, however, as yet impossible to state which particular type of soil or locality is the best fitted for this industry. In the southern portions of the states bordering upon the Gulf of Mexico and in the eastern portions of the South Atlantic states there are so many promising young orchards, that it seems reasonable to suppose, that the pecan may be grown profitably in almost any fertile, well-drained portion of this area and that no one section distinctly better suited to the industry than any other.

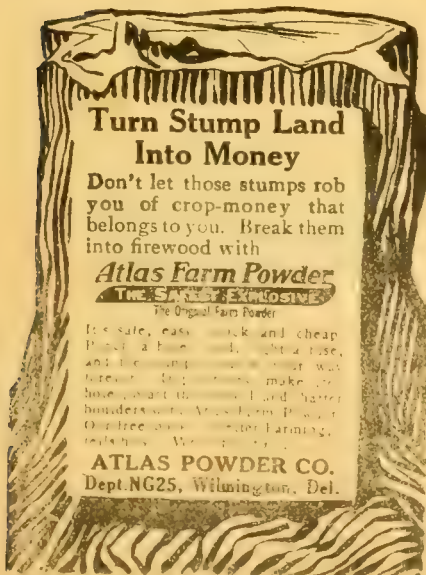
The probable profits from an orchard are difficult to estimate, because both the demand for and the supply of pecan nuts are changing rapidly. Ten years or so ago wild pecan nuts were rarely used except in holiday season, and 3 cents a pound to the grower was considered a fair price. The present consumption is so much greater, however, that in 1912 a maximum of 25 cents per pound was quoted. The average price for wild nuts probably ranges between 10 and 15 cents per pound. During the same period the demand for the named varieties of pecans has been stimulated, and at one time prices of 1 to 3 cents a nut for these were not unusual. Increase production, however, has resulted in forcing the named varieties into competition with other nuts and with the wild product, and prices have fallen in consequence. During the fall of 1914 the whole

sale price for a number of well-known varieties was from 30 to 45 cents a pound.

The increased production has also called attention to the need for the development of satisfactory methods of marketing. Hitherto the grower has disposed, to a large extent, of his product through the express and mail order service. With the changed condition of the industry, however, it is not probable that these methods will prove adequate in the future.

In Farmers' Bulletin 700, emphasis is also laid upon the necessity of selecting the proper variety of pecans for the section in which the orchard is located. In the period since 1890, when it may be said that named varieties of pecans were first introduced, about 100 different sorts of the nuts have been advertised at one time or another. Many of these have proved failures, but there are others whose suitability for certain localities seems to have been definitely established. A list of the varieties which can be recommended for various sections is contained in the bulletin.

Whatever variety is planted, it is hardly safe to count upon commercial returns from the orchard in less than 10 or 12 years. Furthermore, it is said, the propagation of pecan trees, like that of fruit trees, is a highly specialized industry. The selection and preparation of suitable soil, the choosing of seed and its proper care previous to planting, the details of planting, the care of the young seedlings, the work of budding or grafting, and finally, the digging of the trees, are all processes which require much experience. Under ordinary circumstances, therefore, it is better for the average man to purchase his stock from some nursery than to attempt to raise it himself. It sometimes happens, however,



that trees of the desired variety are not readily obtainable and that the planter must be his own nurseryman. For this reason Bulletin No. 700 contains detailed instructions for the guidance of the beginner.

Planting the seed in the place where the tree is expected to stand in the orchard is not recommended, for a number of reasons. The young trees are difficult to protect from injury while crops growing between the rows are being cultivated, and it frequently happens that none of the seedlings develop into suitable stock for budding or grafting. There is also a wide range in the length of time required for seedlings to attain the proper size for propagation, and as a result orchards in which the trees have not been transplanted frequently show a most undesirable lack of uniformity. Transplanting, moreover, tends to encourage the development of a fibrous root system and is therefore to be regarded as a benefit to the tree and not an injury.

The pecan does not reproduce itself true to seed. It must therefore be budded or grafted, in much the same way that apples, peaches, oranges, and other fruits are treated. Budded trees are preferred by most planters. Nurserymen, however, find grafting more economical of labor than budding, and grafted trees are quite as common in the market as budded ones.

Cleft grafting, nursery whip grafting, annular budding, patch budding, and chip budding are usual methods employed in propagating the pecan. Each of these is described in some detail in Bulletin No. 700. As has already been stated, however, all of these processes require considerable skill, and the results are more likely to be satisfactory if they are performed by trained men.

Where pecan groves are already in existence, much can be done by enterprising owners to increase their productivity by bringing the forest trees more nearly into orchard form. This involves considerable time and expense and unless carefully followed up will not be a profitable venture. Good results, however, can be obtained by the elimination of all undesirable trees, by careful pruning, and under certain conditions, by "top-working" a portion of the grove. The importance of "top-working," indeed, can hardly be overestimated. By this method seedlings and trees of unsatisfactory varieties may be transformed into bearing trees of more valuable kinds. At the present time seedling orchards as well as wild trees are being transformed in this manner over the entire pecan area.—Department of Agriculture.

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

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Grafting Wood of Stuart, Frotscher, Teche. MRS. M. L. RANDOLPH, Bayou Goula, La., "Blythewood Pecan Grove." 10-6

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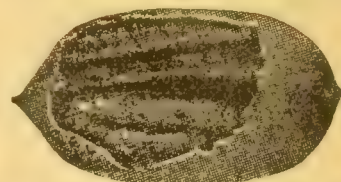
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The tree is a vigorous grower, a regular and abundant bearer and is resistant to disease and insects.

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Catalog free. We pay express. 420 acres.

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F. T. Ramsey & Son
AUSTIN, TEX.

COST OF CLEARING LAND WITH DYNAMITE

(Continued from page 37.)

the explosives and labor used on the clearing had cost him. In addition, he believes that he could sell the land for a considerably higher price per acre cleared than he could have gotten for it as stump land.—J. H. O'NEAL.

EXHIBITS AT LAST CONVENTION

Below we give a list of the various exhibits that were displayed at the last convention of the National Nut Growers Association:

Alston, Dr. N. C., Richland, Ga.: Alley, Clark, Delmas, Delmas (on hickory), Frotscher, Havens, Mobile, Moore, Nelson, Pabst, Schley, Stuart, Success, Van Deman, Wakeenah.

Banning, Mrs. T. A., Robertsdale, Ala.: Delmas, Pabst, Russell.

Cox, J. E., Cuthbert, Ga.: Frotscher, Robson, Seedling.

Curtis, Dr. J. E., Orange Heights, Fla., Curtis, Hume, Kennedy, Randall, Russell, Schley, Stuart, Teche, Van Deman.

Edwards & Patterson., Mill-edgeville, Ga., President, Bradley, Capital, Curtis, Frotscher, Mantura, Mobile, Nelson, Olustee, Robson, Schley, Stuart, Success, Teche, Van Deman.

Garnet, Dr. R. B., St. Augustine, Fla.: Bradley, Curtis, Moneymaker, Stuart, Schley, Teche, Van Deman.

Georgia Experiment Sta., Experiment, Ga., Alley, Appomattox, Atlanta, Bradley, Beveridge, Triumph, Curtis, Centennial, Frotscher, Jerome, Mantura, Mobile, Moneymaker, Nelson, Pabst, Pan American, President, Randall, Robson, Rome, Russell, San Saba, Stuart, Teche, Van Deman. "English Walnut," "Jap Walnuts," cordiformis, sieboldiana, Seedlings of Butternut Type.

Givens, Mrs. M. C., Laurel Hill, Fla.: Seedlings (3), Van Deman.

Gray, Frank S., Jacksonville, Fla.: Frotscher, Teche, Black Walnut, Hickory (3 plates).

Griffin, C. M., & Company, Macclenny, Fla., Bradley, Curtis, Moneymaker, President, Stuart, Teche, Van Deman.

Gunn, John D., Cuthbert, Ga.: Schley, Stuart, Seedlings (3 plates).

Hill, H. L., Cuthbert, Ga.: Frotscher, Rome, Stuart, Seedling.

Jefferson County Pecan Company., Monticello, Fla.: Bolton, Nelson, Russell, Stuart.

Jones, G. H., Jesup, Ga.: Frotscher.

Kernodle, J. A., Camp Hill, Ala., Capital, Frotscher, Hall, Mobile, Nelson, Pabst, Rome, Schley, Stuart, Success, Van Deman.

Lott, J. A., Waycross, Ga.: Rome, Seedling, Jewett Seedling.

MacIver, W. I., Thomasville, Ga., Bolton, Delmas, Teche.

Mathews, C. O., Cuthbert, Ga., Juglans Sieboldiana.

McManus, T. S., Waldo, Fla., Delmas, Pabst, Randall, Rome, Russell, Schley, Stuart, Success, Van Deman.

North Carolina Experiment Station, Willard, N. C., Centennial, Frotscher, Moneymaker, Schley, Stuart, Sweetmeat, Van Deman.

Patterson, Fred, Cuthbert, Ga., Stuart.

Perry, A. S., Cuthbert, Ga., Frotscher, Schley.

Poland Plantation Nursery, Monticello, Fla., Delmas, Schley.

Simmons, H. H., Jacksonville, Fla., Curtis, Moneymaker, President, Rome, Stuart, Teche, Van Deman.

Simpson Nursery Co., Monticello, Fla., Curtis, Delmas, Moneymaker, Schley, Success, Teche, Van Deman.

Standard Pecan Co., Monti-

cello, Fla., Delmas, Pabst, Russell, Schley, Stuart.

Strickland, A. J., Blackshear, Ga., Frotscher, Schley.

Summit Nursery Co., Monticello, Fla., Curtis, Bolton, Delmas, Dewey, Eggshell, Frotscher, Increase, Moore, Pabst, Russell, Schley, Stuart, Success, Teche.

Tex. A. M. College, Horticultural Department, Atwater, Tex., San Saba, Sovereign, Venus, West Texas Seedling.

Timmons, W. W., Tifton, Ga., Alley, Delmas, Stuart.

Whitney, C. L., Thomasville, Ga. Carman.

Wight, J. B., Cairo, Ga., Capital, Delmas, Frotscher, Hadley, Havens, Money maker, Nelson, Pabst, Stuart, Success, Van Deman, Unidentified variety (1 plate).

Williams, Dr. W. P., Blackshear, Ga., Money maker, Jerome, Nelson, Success, Stuart, Van Deman, Williams, Seedlings (2 plates).

COCONUT PRODUCTION IN EAST AFRICA

In the British Protectorates of East Africa and the territory of German East Africa there are estimated to be some 75,000 acres of land devoted to the production of coconuts. This acreage contains approximately 4,000,000 trees and produces yearly about 136,000,000 nuts; the annual exports of copra total \$1,315,200 in value. The largest factor in this production is the island of Zanzibar, together with the sister island of Pemba, where the area of the coconut plantations aggregates about 45,000 acres, containing approximately 2,500,000 trees, the average planting being 55 trees to the acre. Zanzibar's exports of copra in 1915 amounted to 205,711 hundredweight (hundredweight, 112 pounds), valued at \$796,620, of which 78 per cent went to France (Mar-

seilles) and 20 per cent to South Africa.

The territory of German East Africa comes next, with a planted area of approximately 20,000 acres, on which there are said to be about 1,000,000 trees, the average planting being 50 trees to the acre. Exports of copra from that territory in 1913 (no later statistics being available) amounted in value to approximately \$400,000, practically all of the product going to France and Germany.

British East Africa is at present the least important source of production, notwithstanding the fact that its possibilities are at least equal, if not superior, to the other areas mentioned. A careful estimate of the area under coconut cultivation shows a total of about 10,000 acres, containing approximately 500,000 trees, averaging 50 trees to the acre, and the exports of copra during the fiscal year ended March 31, 1915 (the last available statistics) amounted to 27,722 hundredweight, valued at \$118,600, of which 65 per cent went to France and 15 per cent to Great Britain. The production of copra for that year was about 30 per cent less than for the previous year.

There is no commercial production of coconuts in the British Protectorate of Uganda.

The general methods of coconut production are much the same throughout East Africa and a statement as to average conditions on the coast of British East Africa would be equally applicable to the other producing areas, with the following exceptions:

The plantations in German East Africa have had the advantage of scientific cultivation and European management, with the result that before the outbreak of the war some of the finest plantations in all Africa

STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right. Chas. Crossland, Bennettsville, S. C.

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and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

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Will be pleased to book orders now for Grafted Pecans

No Seedlings
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PECAN TREES

As GOOD as can be grown

And as CHEAP
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J. B. WIGHT, Cairo, Ga.

Fine
Pecan
Trees

And Fine Orchards

Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

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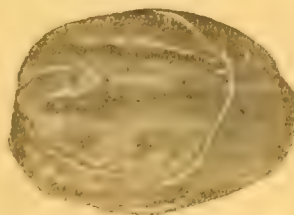
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Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

had been developed in that colony. Since that time, however, they have received little or no cultivation, due to the military situation and an entire absence of any available market for copra. It will probably require one to two years' work to rehabilitate the plantations and bring them to their former high state of cultivation.

In Zanzibar the limited area of available land for new plantings offers little hope that the industry there will be greatly extended in the future. The island is one of oldest centers of coconut production, and it is still the most important source of copra on the East Coast of Africa.

The long coast line of the Protectorate of the British East Africa holds forth a promise for a future supply of copra that will rival, and eventually surpass, that of Zanzibar. The climatic conditions are admirably suited to the requirements of the coconut palm; serious diseases have probably not developed in the same ratio as they have in other producing areas of the world; the government has taken an active interest in the welfare of the industry; transportation facilities are being developed; and, what is more important, European capital and management have been devoted to the industry in increasing measure. Old plantations have been purchased from their easy-going Arab owners, cleaned up, and placed in a better state of cultivation; new areas have been cleared and planted with selected varieties; "tapping" has been discouraged; and the average production of nuts has been raised over 50 per cent within the last five years. The conclusion to be drawn from these facts is that this Protectorate must eventually become an important source of the world's supply of copra.

Good coconut land, uncleared,

ranges in price from about \$4 per acre for land located far up the coast from which the products would have to be shipped many miles by dhows to the markets at Mombasa and Lamu, up to about \$50 per acre for suitable land within a radius of 5 or 10 miles from Mombasa Island. Native plantations in full bearing may be purchased for \$125 to \$400 per acre, according to the condition of the trees and proximity to a shipping port. For purposes of government valuation a palm tree is valued at 5 to 10 rupees (\$1.62 to \$3.24), according to age, condition and location.

A coconut palm in this district begins to produce a commercial crop in the sixth year after planting, and European planters estimate that the total cost for the six years of bringing a grove into bearing, including the cost of clearing, seed nuts, planting, cultivation, management, and other overhead expenses, but not including the cost of the land, averages about \$80 an acre for a plantation containing not less than 100 acres. They state further that in ordinary years and under normal conditions of production and market prices a well managed European plantation should easily return 30 per cent on the investment.—Commerce Reports.

BUD-WORMS

Early in the season when the buds first appear they are attacked by small "worms" or caterpillars of varying appearance, usually yellowish or pale greenish, with dark heads and generally known to pecan growers as bud worms. Several forms of these creatures have been reared by the writer, some of which also effect related trees, such as hickory and walnut. In their active or "worm" stage they are all very much alike, and

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even the adults are not well known to entomologists. The habits of the different forms have not been thoroughly investigated. The Bureau of Entomology has received more correspondence relating to their injuries than of any other call of pecan pests, and it is quite obvious that a careful study of the different forms of bud-worms is desirable. This much has been learned, however, that each species has diversified habits, and feed on buds, tender twigs, and leaves, according to the season; also that two or three generations of each develops in a year. One species was very abundant during the year 1915, having been reported from Florida, Georgia and Texas, and, as it has been studied more thoroughly than the others, may receive special mention. It is to be found from the District of Columbia southward, frequently in great numbers. It is called the pecan bud-moth (*Proteopteryx deludana* Clem.)

This species attacks buds, tender twigs, and leaves alike, in some cases rolling the latter into tubes of regular sizes, in others joining them by means of webs somewhat irregularly. As we have received this pest from May to August, and the writer has found it at work as late as October, it is probable that three and perhaps four generations or broods are produced in a single year.

Remedies—The fact that there are several generations makes this species unusually difficult to control. Nevertheless if the first generation is treated with a spray of Paris green or arsenate of lead on its first appearance in May, this will do much to lessen the numbers of the insect to treat in after months. It is desirable that the spray be applied before the insect has time to conceal itself in the buds; later generations can be more easily reached.

In its control co-operation with other pecan growers of a given region should be secured, and if it be found on walnut and other trees, these should be also treated to spray.

Some growers inspect their trees and cut away the injured buds as they are detected, destroying the insects with them.

Mr. Herrick, recommends daily inspections and the removal of the bud-worm on a pin point, a somewhat laborious but efficient method of control if one has the patience to continue it.

From present knowledge of the habits of the other species of bud-worms it is not possible to prescribe other remedies than those above given.—F. H. Chittenden.

CHINESE OIL TREES DO WELL

The Chinese Wood Oil trees (*Aleurites Fordii*) growing on the University of Florida horticultural grounds are bearing well this year. Some trees, about six years old, have from fifty to

seventy-five fruits, which means they will yield from two hundred to three hundred large seeds, the size of a pecan. The seeds yield twenty-eight per cent of one of the best drying oils known. The seeds are not edible. Large importations of this oil are made to America from China. The trees are deciduous, and bear white flowers in March. The flowers and the large leaves make the tree attractive. The recent freeze, during which the temperature fell to seventeen degrees, did not injure the trees at all. Seed from the trees sprout easily in the field.

GEORGIA-FLORIDA PECAN GROWERS ASSOCIATION

The annual meeting of this body was held at Thomasville, Ga., May 30-31. The program carried the names of fourteen speakers, three of whom were new while the subjects covered matters of general interest, but conformed closely to previously discuss subjects.

For the first time in years the

editor of The Nut-Grower was not in attendance, but from news paper reports we learn that Mr. R. B. Small, of Columbus, Ga., was elected President; C. S. Parker, of Thomasville, Ga., Vice President and W. M. Parker of Thomasville, Sec-Treas.

Dr. John T. Bogard, of Foreman, Arkansas, has been a regular subscriber to the Nut-Grower for a number of years. A recent letter from him says his Arkansas orchard is doing very well.

Nuts are becoming more popular as meat substitutes, although many kinds of nuts are not cheaper than meat if bought on the market at present prices. On many farms, however, it is merely a matter of picking up hickory-nuts, hazelnuts, or walnuts instead of letting the hogs get them, and on a great many others it is a very easy matter to raise peanuts enough for the family and have plenty to fatten a few hogs.

PECAN TREES

NURSEYMEN—AND—PLANTERS

Be your wants large or small, we can fill them from our fine blocks of trees.

It will be greatly to your advantage to write us for terms and prices.

Our stock will please the most exacting.

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The largest pecan acreage in the United States is planted along our lines in Georgia and Florida.

As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

Along with general farming and stock raising the pecan is proving very profitable.

Write us as to land, prices, and location for such farms

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"The Standard Railroad of
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Jacksonville, Fla.

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Only the best tested varieties are grown. Why not get them?

We have a large variety of fruit, pecan and other nut and shade trees, shrubs, evergreens and roses. Can supply in car load lots.

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P. J. Berckmans Co.,

FRUITLAND NURSERIES

Augusta, Ga.

Our Landscape department is equipped with competent landscape architects and engineers. If you wish to beautify your grounds, consult us.

BOOKS AND CATALOGS

The Gardner Nursery Co., Osage, Iowa, lists many plants and seeds and gives special attention to Everbearing Strawberries.

Agricultural Statistics for January, 1917, published by the Hale Publishing Co., of St. Louis, contains some sixty pages of interesting agricultural data.

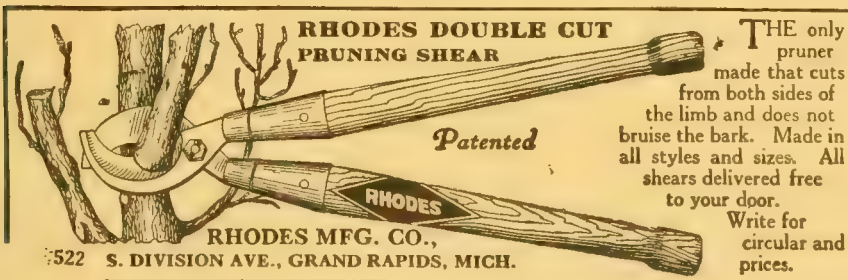
"Make Your Home Grounds Beautiful" is the slogan used by The Austin Nursery, F. T. Ramsey & Son, Austin, Texas. Their catalogue lists many of the things they can furnish for this purpose.

Moncrief Orchard Book has been followed by sixteen page supplement giving attention to pedigree nursery stock. It can be obtained from the Winfield Nursery Co., Winfield, Kans.

Citrus Fruit Improvement is the title of Farmers Bulletin 794 of the United States Department of Agriculture. This publication is of such interest owing to the fact that Oranges are an attractive fruit for a considerable belt of the pecan territory.

Circular No. 76 of the Georgia Experiment Station bearing date of February, 1917, reports observations on Pecan varieties made by Prof. H. P. Stuckey during the seasons of 1914-1915-1916. The matter is tabulated in a comparative way and condensed for convenient use.

Bulletin No. 124 of the Georgia Experiment Station by Prof. H. P. Stuckey, classifies pecans into two groups with relation to Self-Sterility. The pecan student will find much of interest in this issue. Copies can be obtained of the Station Director at Experiment, Ga.



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PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson: a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

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The Nut-Grower Company
WAYCROSS, GA.

JUL 11 1917
Agricultural
College

The Nut-Grower

Volume XVI

July, 1917

Number 4



SUCCESS is porportioned to labor in degree, because, ordinarily, as is the amount of seed sown, so is the harvest; he who studies much will know more than he who studies little. In almost all departments it is "the diligent hand which maketh rich."—Frederick W. Robertson.

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NUTS AS AN INTEGRAL PART OF THE DIET

The fact that nuts are used in greater abundance shows that people are appreciating their food value. The five classes of foods are carbohydrates, protein, mineral, fat and water. Nuts contain all of these five food principles in a most concentrated form. In general nuts are rich in protein and fat but contain little water. The pecan is the richest in fat, but the brazil nut, hickory nut and walnut contain upward of 60 per cent fat. Nuts are well supplied with mineral, which is well used by the body. The mineral in walnut is phosphoric acid and this compares favorably with that of cereals.

Digestibility: Nuts should not be ranked with puddings and pies the discomfort caused from eating nuts results from the nuts not having been well masticated, and because they are added to

(Continued on page 55)

The W. B. Dukes Pecan Farm Moultrie, Georgia

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Cairo, Ga.

THE NUT-GROWER

VOL. XVI

WAYCROSS, GA., JULY, 1917

NO. 4

DEVELOPING A PECAN ORCHARD

By HERBERT C. WHITE

Read at the Meeting of Georgia-Florida Pecan Growers Association.

After sixteen years of practical experience and observation in the production of pecan orchards I have concluded that the most successful results can only be obtained by applying the now threadbare term preparedness—the thorough preparation of the land, and particularly the tree rows, before the trees are planted. Few soils are ideally suited for planting without preparation. By “preparation I mean the deepening of the soil so that the roots of transplanted trees can easily penetrate a sufficiently large area of rich soil which has porosity and water holding capacity. The larger and deeper this area in the beginning the sooner will the trees reach bearing. With ample preparation of the soil before planting the battle is three parts won. The haste which has characterized many large plantings (of which we are all guilty) has ultimately caused much added expense and delay and after much lack of uniformity in the orchards. The most interesting and valuable demonstration of “preparedness” I know of is with a relatively small orchard near Ocean Springs, Miss., and owned by my old friend Mr. Chas. E. Pabst. It was very poor sandy cut-over pine land which at least one “expert” said would never make trees. Mr. Pabst realized the poverty of the soil, but to overcome this he planted velvet beans where the tree rows were to be, for two or three years prior to planting. The vines were of course plowed deeply under. The growth of the trees has been amazing. They grew so fast that he wrote to Mr. S. H. James to know how to stop them growing so fast as Mr. James was one of those who had predicted the failure of trees on such land.

You may have noticed that occasionally where large holes are dug on land with clay subsoil the growth decreases and often rosette appears. It is obviously certain that the changes must be caused by the roots striking the “walls” of the holes and retarding their passage. In the mean-

time the trees have been well nourished as indicated by their growth, so much so that when the root spread is checked or retarded—even temporarily—the roots are unable in dry times to absorb enough moisture and perhaps food to maintain the luxurious top with a resultant unbalancing of the entire system. In experimental work with dynamite I have positively caused rosette to develop upon the side of the tree dynamited, by destroying too many roots. After one or two seasons when the roots had formed again and grown into the loosened subsoil rosette has largely or altogether disappeared. Please remember that only the side where roots were destroyed was there any rosette, the opposite sides of trees being pictures of health. In the winter of 1915 (January) I dug trenches 2 ft. deep for an asparagus bed the first row eight feet from a thrifty five year tree. Many roots were carelessly cut, one being one half inch in diameter. Rosette developed very badly that summer, was considerably less in 1916 with no sign of rosette now. Some hardened sinners are already showing the characteristic first signs of rosette by the curling and yellowing of the terminal leaves. In our orchards we sometimes find a very fine tree with rosetted trees around, the soil being apparently the same; I account for this by believing that the extra vigorous tree has been planted over or near where a former forest tree existed whose stump has either been pulled or rotted out and the roots have had a suitable theatre for their growth. In the light of our present knowledge, the result of costly experience, there is apparently no way of adequately preparing our orchard lands perfectly except by the use of dynamite, blowing the clay subsoil out and filling the holes with good loamy topsoil in which there must be a large percentage of sand, something in which the roots can easily grow as well as have a more constant supply of soil moisture—in other words, make a deep topsoil.

The makers of dynamite issue full instructions for subsoiling land but they do not go far enough when it comes to orchard planting. I will add that unless the clay subsoil is thrown out, or dug out, the soil will run together again eventually and for this reason I believe the filling of the holes with good topsoil or even plain sand, rather than let the clay run together and in the meantime leave cavities which may take two or three years to settle. In 1915 I did a good deal of dynamiting around growing trees preparatory to planting other trees. Being near my house I ran hundreds of gallons of water into the holes, after filling and packing the holes by tramping, until the water stood on the surface. From time to time depressions have occurred after rains at many of these places and as late as within the last six weeks further sinkings have shown up, with a hole on the surface in one case. This brings me to the point where I would say that it is unwise to dynamite deeply or heavily unless for some time before planting. One company in my neighborhood suffered abnormal losses of newly set trees 3 seasons ago for no other reason in my opinion than every tree place was heavily dynamited very shortly preceding the planting. It is possible that a lighter charge of sixty per cent of dynamite to blow out a hole instead of a heavier charge of twenty five or twenty per cent explosive would not leave the dangerous cavities below the initial point of explosion. If we cannot dynamite and fill in the holes all over our prospective orchard land at one time we can do some annually, coming out ten or fifteen feet each season. Varieties of trees to be used must be governed by locality. The distance apart is one for personal decision but to throw a little light on the subject I may say that it is beginning to be next to impossible to raise satisfactory crops of corn among well grown trees from eight to ten years old were set twenty to the acre or 46.8 ft. apart. Persons intending planting pecans should figure on this. Cultivation should begin early and be continued not later than August or winterkilling may result. Deep plowing should only be done in the Fall or early winter as if any roots are damaged they will repair by Spring. Fertilizers—Where the soil is properly prepared before planting as indicated above there is no need of commercial fertilizers, except that a handful of dried blood, bone, tankage, fish scrap or some well rotted manure each well mixed with soil will help. The use of high grade water soluble inorganic fertilizers without an adequate and continuous water supply is dangerous.

Much rosette has undoubtedly been caused by the concentrated use of such fertilizers as acid

phosphate, muriate and sulphate of potash and nitrate of soda. It is not much good talking about potash in any form now, yet I think we will soon be able to buy it again. Kainit is less objectionable than any other form of potash for pecans. The large percentage of sodium chloride (common salt) in its composition, with its hygroscopic nature will attract moisture from the air. Moisture is the dominant factor in plant life and particularly when using fertilizers. If we were sure of an abundant and continuous water supply we could hardly overdo fertilization. The danger with highly concentrated plant foods is that after they become soluble if a dry spell comes the tender rootlets are injured by the strong or caustic effect of the fertilizers in close contact. The result is the deprivation of the tree of the only means it has of obtaining soil moisture and food. Rosette, malnutrition, indigestion if you please, and other things happen.

The practice now in some of the best commercial orchards is to plant legumes and plow under the vines during the winter, saving seed for the following year. Both ground limestone and ground phosphate rock are being used, the latter more particularly among bearing trees. Both help the legumes, but of the two the ground phosphate rock is preferable as it helps more directly both the trees and the legumes. Applications of either every four or five years should be ample. Stable or lot manure is invaluable, but the supply is too limited to go over extensive acreages. One good application put well under the soil will show its effect for several years.

Pruning is without doubt the most difficult phase of pecan work to master. A great deal of pruning is not necessary, but what is done should be done right. An intelligent person can learn the mechanical operations of budding and grafting in almost a few minutes. To prune correctly one must form a mental vision of how each tree should look in five, ten or twenty years, ultimate strength to withstand high winds and symmetry being the objects. The growth of the tree can more often than not be more stimulated by the skillful pruner than with the most expensive fertilizers. "Trimming" trees is one thing; scientific pruning another. To shape a tree which normally lives 100 years or more and to shape that tree so that its framework will withstand the greatest pressures of storms is a nice problem. Each tree is a separate problem and frequently the most experienced are perplexed at is what best to do to accomplish the desired result. Some trees may take two or three years to reach the best shape, particularly when neglected in infancy. A skillful pruner may easily

earn the soubriquet of "butcher," "vandal," etc. by the experienced or doctor, or preferably "surgeon" by those who know. I cannot pass the subject without cautioning against denuding a tree of sprouts the first season at least. Let it grow as it will the first year and sometimes for two years after setting out. Many trees looked like bushes. At end of second season the sprout best suited for trunk of tree was left, everything else cut off, the whole energy of a strong and stocky root system being thrown into the one sprout. The growth was phenomenal and the orchard was set with trees, which interest some to know had been budded in nursery rows the same summer and planted in December: the bud growth in no case was over 8 inches. On the other hand I know of a large commercial planting in the Albany district where newly set trees were religiously stripped of everything except the terminal buds during the first summer. The mortality in that orchard has been greater than in any other case. The shade of sprouts on the newly set tree causes it to become more stocky, less liable to the attacks of borers. Both mules and drivers are better able to see the trees and the possible damage from trace chains and single trees minimized. A mule biting at a tree is not likely to defoliate it as would be the case if a few leaves only were left at the extreme top. There is less danger of tree being top heavy when headed up while the head can be raised a little each year as the stock becomes stocky enough to support it. I have had experience with parties who ripped and roared because trees were no taller for their age and insisted upon heading them high in the beginning so that people passing at high speed in luxurious automobiles and other vehicles could see the trees above the tangle of corn and beans. One of the same parties afterwards recanted and actually had his trees notched on the trunks to induce a growth of lower limbs.

Insects—No region is free from harmful insects but they are apparently more numerous in some localities than others. Of the more serious pests the flathead borer is perhaps the most general. There is no known way of destroying them other than by cutting out the larvae from under the bark. The larvae cannot easily be found until they are fully one fourth of an inch and over in length. The adult insects begin to emerge in late April and May and may continue later. In June and each succeeding month the trees should be carefully examined and young larvae cut out. Many deterrent washes have been tried as well as trap logs but it is unsafe to rely entirely upon either and the knife is the best remedy. Insects such as web worms, twig girdlers are easily de-

tected and can be disposed of by any observant person. Where the more, so to speak, insidious pests occur, such as budworms, and casebearers either the State or Federal Entomologists should be consulted and the latest advice obtained.

In conclusion I may say that it has taken a long time and much money to reach even the point we are now at as those who have been through the mill well know. We have all made mistakes and no doubt making them now and there is still much to learn. There are however certain major errors which as a result of experience we should now avoid and the sole purpose of this paper is to point out a few dangers and make a few suggestions to those entering the business of pecan culture.

Time passes rapidly and the period for making arrangements for the 1917 convention which is to meet in Mississippi will soon be here. Much will depend upon the local committee for rounding up a large general attendance. The program is not so important as it is to have the interested people present. Organized work will accomplish big things.

The advertisers belong to The Nut-Grower family just as the subscribers do. They are giving more and more attention to the preparation of their advertising copy, so that it classifies as news and educational matter to such an extent that the advertisements become a feature of the publication's usefulness beside serving the advertiser efficiently. We naturally desire that all our readers will note everything we publish, and are particularly desirous that our advertisers are remembered when orders are to be placed.

The great Coastal Plain country, to which Southeastern Georgia contributes much territory, has attractions aside from the pecan. Being a natural live stock range and the home of leguminous plants, with a soil and climate well suited to all these industries, it makes three and four story farming practicable. This program was in mind when Prof. Smith wrote for a leading journal the story of Pigs, Peas and Pecans. Since then the advent of the velvet bean and the elimination of the cattle tick has put the dairy cow and beef cattle on the Coastal Plain map, and has added the fourth story to the farm structure. Pigs are literally in clover with the cow peas, while the velvet beans and cattle add to the hog rations while building up the fertility of the orchard and farm lands. Besides, the all-the-year pasture, by a proper selection of crops, makes the cattle business profitable, even without the cow peas and pecans.

The Nut-Grower

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Top working of pecan trees is extending beyond seedling trees. Some of the standard and favored varieties which are not doing well in some localities are being converted into more suitable or more productive kinds.

Records of pecan trees as to their growth as well as bearing and immunity from disease and insects should be made in every pecan locality. Such records, when gathered and tabulated, are not only very interesting, but have a direct value in solving the problems incident to the industry.

During the past marketing season a Chicago dealer sent out quotations on varieties without regard to grades. He placed Schley at the head of his list of seventeen varieties, offering 60 cents for it, while Stuart was sixth at 40 cents, and others at less amounts down to 26 cents for Moneymaker.

The matter of grades and standards for marketing pecans is still a problem. Those who have some system find it a slow process to obtain uniformity on the part of growers and dealers, with the natural result that prices are fixed at a figure below what should be obtained for properly graded stock.

There is a great demand in these war times for black walnut timber. Prices range as high as \$1.00 per thousand board feet. With the supply being constantly diminished and no new plantings, it is reasonable to suppose that high prices will continue indefinitely. It looks like a good investment to grow this valuable wood for the market.

Character in trees counts in the value of an orchard in the same general way that it does in man's life. However, one should discriminate between the reputation and character. A reputation can be bought or obtained in various ways, while character calls for inherent and permanent qualities. The free peddler gives his stock a reputation. The reliable nurseryman puts character into his trees.

Our March-April number proved to be unusually attractive. The following is simply a sample of how it impressed our readers. The call for extra copies continued for about two weeks from issue.

Enclosed please find ten one-cent stamps. Will you kindly send me the March-April number of The Nut-Grower? I want to pass it on to someone I am trying to interest in pecan culture and I think this number is particularly instructive and illuminating. It deals with the things people growing orchards want to know.

As many of our subscribers know, we do not limit our services to simply publishing and mailing the monthly issues. It is the little bits of particular information that a farmer—or orchardist wants that goes to him in a letter in answer to a postal card request that counts. Also hardly a day or mail passes without something coming that enables us to be helpful. It is not only from subscribers the questions come, but from many sources and sections people are wanting information regarding the pecan. A sample copy and a subscription blank is our first move in replying to those whose names are not on our list.

The following letter reads much like many others which reach us frequently, but it has some unusual features. Johannesburg is a considerable distance away, in a locality which gives the name to the publication which came to our exchange several months ago:

Johannesburg, South Africa.

Editor The Nut-Grower,

Waycross, Georgia:

Under separate we have pleasure in mailing you a copy of the South African Fruit Grower, and should very much appreciate a copy of your paper in exchange.

If you feel that we can be of assistance to each other, we shall be pleased to place your name on our permanent exchange list.

SOUTH AFRICAN FRUIT GROWER.

NUTS AS AN INTEGRAL PART OF THE DIET

(Continued from page 50)

the dietary when sufficient food for the day has been taken. With careful planning and combining them with bread, fruit, cereals or vegetables, nuts can be made a most helpful part of the diet. Nut protein is not so easily assimilated as meat protein, but when used with a fruit and vegetable diet, the nut protein is fairly well assimilated. Salt adds to the palatability but does not affect the digestibility of the nuts. The California Experiment Station reports that after 100 digestive experiments on a diet composed largely of fruits and vegetables, it was found that 90 per cent of the protein was digested, 89 per cent of the starch and 86 per cent of the total energy was available. Comparing this with the digestibility of the

normal mixed diet we find not a great deal of difference, since 94 per cent protein, 92 per cent fat, 96 per cent starch was digested. Nut protein has been proven fairly well digested, but as yet no experiments have been made of the rapidity of digestion. The digestibility depends on the thorough mastication. Nuts have high nutritive value, and the human system can assimilate a very large proportion of the nutriment contained in nuts, when they are rationally eaten.

Place in diet: Nuts are concentrated and should therefore be eaten with bulky foods, such as fruit and vegetables. There are 60 grains of protein in the following: 9 eggs, 4 pounds milk, 2-3 pound almonds, 1 1-5 pounds peanuts, 10 pounds bananas, 11 pounds lettuce, 33 pounds apples.

Fruits and nuts should have a definite place in the diet from an economical standpoint. Ten cents will buy: 400 calories with 30 grains of protein in steak at 25c per pound, 600 calories with 25 grains of protein in shelled almonds at 50c per pound, 1,800 calories with 90 grains of protein, in peanuts at 10c per pound, 750 calories with 35 grains in peanut butter at 35c per pound.

Not only peanuts but the more expensive nuts are cheaper sources of protein than meat. Nuts vary in composition but all contain a large per cent of protein and can be used interchangeably in the diet with meat.

In conclusion: Nuts are relished by most persons. Nuts are nutritious. Nuts may be used by themselves and in combination. Nuts have a legitimate place in our diet. Fruit and nut diet should have an integral part in the diet and can be used interchangeably with meats. They should be classed among staple foods, not accessories. They are less subject to contamination than other food.—MISS AGNES

ELLEN HARRIS, Director Department of Home Economics, Florida State College for Women.

NUT RECIPES

NUT BREAD

2 1-2 cups sifted flour (1-2 Graham, 1-2 white).

3teaspoons baking powder.

3-4 teaspoon salt.

1-3 cup sugar.

1 cup nuts cut in pieces, but not crushed, or

3-4 cup nuts and 1-4 cup raisins.

1 egg.

2-3 cup milk.

3 tablespoons butter.

After mixing the ingredients, put in a greased pan. Let stand 10 minutes. Then bake in an oven (not too hot) for 40 minutes. This amount makes one loaf of bread.

DIVINITY FUDGE

4 cups sugar,

1 cup water,

1 cup Karo Syrup (light)

1 cup chopped nuts,

Whites of two eggs,

1 teaspoon vanilla.

Boil sugar, syrup and water together, until it reaches the soft ball stage, when dropped in cold water. If weather is damp, the almost hard ball stage must be reached. Beat eggs until white and foamy. Drop boiled mixture gradually in white of eggs, beating continually. Beat until mixture is cooled off a little, then put nuts and flavoring in. Beat until thick and drop from teaspoon, or pour on buttered platter and mark in squares.

CHOCOLATE FUDGE

2 cups sugar,

3 squares chocolate,

3-4 cup milk,

1 teaspoon butter,

2-3 cup chopped nuts,

1 teaspoon vanilla.

Boil sugar, chocolate and milk

ROOD PECAN GROVES

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PECAN TREES

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Monticello, Fla.

until it reaches the soft ball stage, when dropped in cold water. Remove from fire, add butter, cool, add vanilla and beat until thick. Pour on a buttered pan or platter, and mark in squares.—Miss Agnes Ellen Harris.

NUT RECIPES

CHESTNUT DRESSING

Parboil one pint of chestnuts about ten minutes; take off the shells and blanch. Boil until tender in salted water and rub through a colander or put through the meat grinder. Add half a cup of bread crumbs. Break an egg into this and stir well; and if the turkey is not very fat, stir in a tablespoonful of butter.

MARSHMALLOW PUDDING A' LA STANLEY

One-half pound marshmallows,
One cup heavy cream,
One-half teaspoon vanilla,
One-half cup candied cherries,
One-half cup English walnuts,
Two teaspoons powdered sugar.

Cut cherries, walnuts and marshmallows into small pieces; whip cream, add sugar and vanilla, fold in remaining ingredients, mold and chill.

NUT BREAD

This is extremely rich and nourishing and not indigestible to healthy people. Prepare hickory nuts or walnut meat enough to fill a cup, chop an equal amount of seeded raisins. Put these into a bowl and add to them the yolks of three eggs, a tablespoon of lard or oil, two tablespoons of sugar, a little salt, a half cupful of warm water in which a half of an yeast cake has been dissolved, a cupful of sweet milk, and sufficient flour to make a soft dough. Mix and knead until spongy and smooth.

Put into a greased baking pan, grease the top, cover and set aside in a warm place to rise. Do this after breakfast, work the dough over about two o'clock and bake at supper time. In warm weather it can be made before breakfast, worked over about ten o'clock and baked at midday.

PECAN LOAF

Mix together one cup of bread crumbs, one cup of pecans, one cup of milk, one cup of boiled rice, two eggs, two tablespoons of butter. Season with salt and paprika and bake in a buttered baking dish. Serve with a cream sauce.

EGG AND NUT SALAD

Cut six hard boiled eggs in halves, crosswise, keeping the whites in pairs. Remove yolks and mash. Add mayonnaise dressing and finely chopped nut meats. Make into balls, fill whites. Arrange on lettuce leaves with nut meats and dressing.

GIRDLETS AND PRUNERS

Only brief mention need be made of the insects which prune and girdle twigs and smaller branches of pecan as well as other trees. Three common species of these pests are known—the pecan girdler (*Oncideres texana*), and the oak pruner (*Elaphidion villosum*). The first is restricted to the south, and its life history has been carefully worked out in recent years. Twigs affected by it present the appearance of having been sawed, and the outer portion remains on the tree for some time before it finally drops. This work is done by the parent beetle prior to the deposition of her eggs. The hickory girdler has very similar habits.

Both of these species can be controlled by gathering the severed branches of pecan and other

food trees of the girdlers, such as hickory, oak, and persimmon—of the vicinity and burning them during the winter or before the insects make their appearance in early fall.

The oak pruner does not especially favor pecan, attacking a variety of trees, including those

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

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of the forest, orchard, and city parks. Hickories and oaks are frequently found with the ground beneath them littered with the twigs and small branches which have been cut off by this insect. The work in this case is that of larva, or "grub", which just before its first transformation severs the wood, all except a portion of the outer bark, so that during the first winter winds it will be brought to the ground. This species can be controlled in the same manner as the girdlers, by collecting the severed twigs.—H. E. Chittenden.

THE VAN DEMAN PECAN

Of pecans that have made good in orchard plantings the Van Deman is probably the oldest and one of the best known varieties. The history of the original tree is given by Prof. Wm. A. Taylor in the Year Book of the United States department of agriculture, for 1904. According to this the parent tree was grown from one of several nuts first planted by Dumine Mire in St. James parish, Louisiana, in 1836. These nuts were from a tree of high local reputation growing in a garden nearby. Only one of the trees produced from this planting gave nuts bearing a close resemblance to those of the mother tree. Mr. Mire was a young man 25 years when he planted

those nuts, and in the fall of 1902, 66 years later, he gave to Prof. Taylor an account of it. At that time the tree was still thrifty, beautiful, of large dimensions, giving annual crops of 200 to 300 pounds.

There are good men who regard a tree planted by their own hands and since grown to majestic proportions with affection akin to that of a father whose children are a source of pride. What a pleasure it must have been to Mr. Mire, from youth to patriarchal age, to watch the growth, development and splendid foliage of this tree through all the good and evil days compassed by two-thirds of a century!

The fine size, shape and color of the nuts from this tree, the sweet and delicate flavor of the kernels along with good cracking quality, caused the variety to be propagated by pioneer nut growers. It found its way into early orchard plantings and soon became a leading variety with nut-nurserymen. With lapse of time occasional complaints were heard that its bearing habit was tardy and shy. Whether this resulted from slovenly methods of propagation, neglect of planted trees or other contributing causes I am not prepared to say; but with me the variety has met reasonable expectation. True, some

effort has been made to secure good stock of it, just as any breeder of poultry or livestock would make who wants the best to be had.

In visiting Marshall, Texas, from time to time, I have been brought into contact with many interesting pecan trees. Not a few progressive citizens over there were inoculated with the pecan microbe years and years ago. Their plantings will receive a more extended notice latter.

Writing now especially of the Van Deman, mention may be made that on the residence grounds of G. P. Stedman is a tree of it that is not only the finest of the variety I have ever seen, but size and age considered, I have not heard of it equal in productiveness. This tree was planted in Mr. Stedman's back yard in January, 1907. It is now 24 feet high and the stem above 20 inches in circumference, with a good spread of branches. It began to bear three years from transplanting and has never missed a crop, each successive yield being heavier than that of the year before. On seeing this tree in September last, bent almost to breaking under the weight of its fruitage, I requested Mr. Stedman to have a photograph made of it, and to keep an account of its product. This has been done, reporting the yield at 40 pounds, which is 10 pounds less than my estimate owing to a large branch being broken by the wind. Otherwise it would have come to the 50 pound mark. But, standing pat on an actual crop of 40 pounds for a tree transplanted in 1907, a new pace may be set for record trees. I have some choice trees of Van Deman and am vain enough of them; but do you wonder that on returning home some buds were brought from the Stedman tree?—Chas. L. Edwards.

WHAT ARE YOU GOING TO TOP-WORK WITH?

A RELIABLE BEARER--- WILLIAMS PECAN

BUDS FOR SALE BY

W. P. WILLIAMS, Introducer

BLACKSHEAR, GEORGIA

REPORT OF COMMITTEE ON STANDARDIZED NOMENCLATURE

Your committee has examined the "1917 Official Code of Standardized Plant Names" and has found it an excellent endeavor for supplying nursery usages of plant names.

However, so far as the pecan is concerned, the code has but a single application that is in reference to the scientific name of the pecan.

The code recommends *Carya* pecan. The most accepted scientific term among pecan growers is *Hicoria* pecan.

It is also the opinion of your committee that *Hicoria* pecan has been accepted by botanists as preferable to *Carya* pecan.

It is admitted by the code that some recent advancements in Nomenclature will be followed by corrections in the code. This may mean that *Hicoria* pecan will supplant *Carya* pecan in a few years; and since the former is the term accepted by most nurserymen, it is recommended that this association continue in its use of *Hicoria* pecan until the question is definitely settled.—Report of Committee at Georgia-Florida Pecan Growers Convention.

REPORT OF COMMITTEE ON RESOLUTION

The Committee on Resolutions submits the following report:

Resolved, That the Secretary forward our thanks to the Secretary of Agriculture at Washington for additional appropriation allotted for the benefit of the pecan industry.

2nd. That we extend our thanks to Mr. Patterson for his untiring efforts in presenting the needs of pecan growers so ably to the Department of Agriculture, which resulted in the grant-

ing of the additional appropriation.

3rd. We thank the mayor and Citizens of Thomasville for their hospitality and members of the local committee for their efforts in our behalf.

4th. We wish to show our appreciation for the work of the various state and government experts and for the interesting papers and discussion, contributed by them.

5th. To thank Mr. C. S. Parker for the demonstration of irrigation at his famous grove and the life saving second demonstration at his home where Mr. Parker was ably assisted by the ladies of the association.—Respectfully submitted, Committee on Resolutions at Georgia-Florida Pecan Growers Convention.

NURSERY LEAF BLIGHT

The nursery leaf-blight of pecans, caused by *Phylllosticta caryae*, confines itself to seedling nursery stock and is readily controlled by three to five sprayings with Bordeaux mixture. The cause and control are so well understood by nurseryman that no further discussion of this trouble is necessary here.

There is still another sort of pecan leaf-blight of common occurrence in certain seasons in the orchards in southern Louisiana and adjacent territory which causes premature defoliation in late summer. Our studies to date indicate that this trouble is not due to a parasitic organism, but falls in that class known as physiological diseases and is due to some unfavorable factor, or factors, in the environment of the plants. The indications at present point to its being associated with the plant's supply of water, but further studies will have to be conducted before clear statements can be made in this connection.

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

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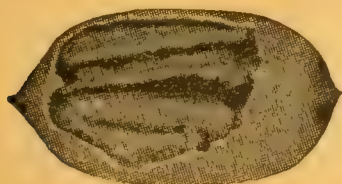
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For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. **THE NUT-GROWER COMPANY, Waycross, Ga.**

PECANS FROM THE VIEW- POINT OF THE GEORGIA STATE BOARD OF EN- TOMOLOGY

Let us say, at the outset, that we earnestly believe the pecan industry in the South, and particularly in Georgia, has a wonderful future. It must be remembered that while we are interested in the progress of the pecan industry throughout the country, we are naturally most interested in it as regards its relations to Georgia, and it is probable, or even certain, that some of our reasons for desiring its extension in Georgia will not apply to some of the other localities where trees are, or may be, grown.

There are two principal phases to our interest in the development of the industry in Georgia. In the first place the section of Georgia in which the

greatest interest in pecan culture is now being shown is, with the exception of this crop, practically without any horticultural industry. There can be no argument over the proposition that this is far from an ideal condition for any section. As has so frequently been said, no man should place all his eggs in one basket. Consequently, if for no other reason, we would encourage the growing of pecans in Central and South Georgia, in order that a horticultural crop of a profitable nature might be established for these sections.

The second great phrase to our interest is the arrival of the boll weevil in Georgia. Throughout the South, wherever the boll weevil has established itself, an earnest endeavor has been made to find other crops which may, in part, replace the production of cotton. This effort is being made in order that the farmer

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St. Joseph, Mo.

who loses a crop of cotton because of the boll weevil, may have some other products to fall back on. It seems to us that the pecan furnishes an excellent crop for this purpose. It is our hope and our honest belief that with time nuts will become not a luxury, but a necessity with the American people; that they will take their proper place in our Nation's diet, supplying the shortage which is beginning to occur in our production of meat, and which is bound to become more and more acute as time passes.

We advise, and even urge, that our people grow pecans. We have faith in the industry, believing that it will work a great good for our people and our state, but we urge just as earnestly, or even more so that no one shall go into this business without first studying it with the greatest care, and then determining that he will give to it his very best endeavors. Of course, in some sections of the country pecan trees grow wild, but the product of such trees can no more be compared to that of the pecan groves of Georgia than can a pineywoods razor-back to a pure-bred Duroc Jersey. The man who buys trees, sets them out and then waits for a crop of nuts has simply wasted his money and his time. Even worse than that, he has injured the pecan industry as a whole in that his poor results may be taken for an argument against pecan growing. Like any cultivated crop, budded and grafted pecans far surpass their wild progenitors. At the same time they need constant and loving care. No one should plant pecan trees in a cotton field and then continue to cultivate the cotton. It may be all right to grow cotton for a few years in a young pecan grove, but the point which we wish to make is that the pecans should become from the minute of plant-

ing the principal crop on the land in which they are set. There is a constant tendency to regard the industry merely as a stop gap, and not as a business in itself. Handled in this way it cannot possibly succeed.

It may seem that we are unnecessarily insistent on this point, but the reason for this insistence is that we believe on this to be the greatest existing menace to the pecan industry. We are constantly receiving complaints and inquiries concerning the poor behavior of groves an inspection of which simply shows lack of care by the owner. In most of these cases the owner of a plantation has set out trees and then left the entire project in the hands of his tenant. In some cases the owner has been unable to tell us when the grove was set or even what varieties were planted. The growing of pecans is a business proposition and when a grove is planted the owner should devote his best efforts to the treatment he can give the trees to make them bring forth the best results. Thus to sum up our attitude toward the pecan industry briefly, we believe it possesses wonderful opportunities for the man who will give his whole heart to his work.

For the past four years this department has employed a trained expert for the purpose of devoting all of his time to the investigation of the insects and diseases that attack the pecan. It is our opinion that the grower who is thoroughly awake will be able to successfully combat the various insects and diseases that attack his trees. With the information which this department, and the U. S. Bureau of Entomology, the U. S. Bureau of Plant Industry and the various departments in the different states have acquired about insects and diseases, varieties best adapted to the different sections, combin-

STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right.
Chas. Crossland, Bennetsville, S. C.

Horticulture

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your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

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As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

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Drawer 176

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ed with the experiences of the successful growers makes pecan growing a far safer business proposition today than ever before.—E. Lee Worsham, State Entomologist, Atlanta, Ga.

THE 1917 CONVENTION

Notice is received to the effect that the 1917 convention of the National Nut Growers Association will be held at Biloxi, Miss., October 10-11, 1917. These dates occur on Wednesday and Thursday of the second week of the month. The convention thus early in the season, and the convention period is one day shorter than the previous meetings, which since the first meeting at Macon, Ga. have covered three days.

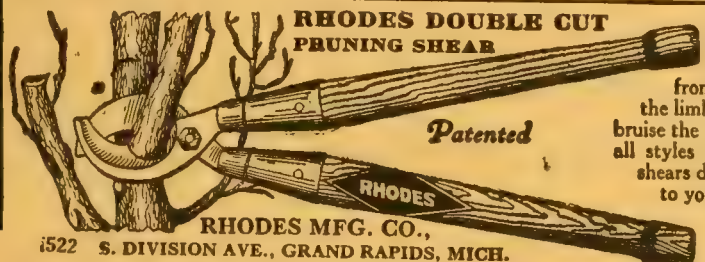
SHEEP AND PECAN TREES

A great deal has been said of the pecan culture, and in as much as I am largely engaged in both the citrus and pecan industry it is possible some might think me too optimistic. But this is far from correct. I have engaged in the two industries along scientific lines, as far as possible and what success has come to me I feel can very readily be shared with others, so far as my experience goes.

There is one thing in connection with the pecan industry which came to me entirely by accident, and I am willing to pass it on.

Pecans Good for Sheep

What I wish to speak of is the connection of sheep growing together with the pecan industry. A little over three years ago I purchased a lamb as a gift for my child. The lamb was turned into one of my pecan groves where it grew and thrived unattended and without the much talk of shelter and sulphur, etc. The trees in this particular orchard were young, but not doing well. I



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PECAN TREES

Many years of practical experience combined with the scientific study of the industry enables us to supply to best advantage the wants of our patrons

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Box G DeWitt, Georgia

found that some of the trees a little later began to grow better, the leaves having a much prettier color and the fruit, when it began to appear, was of better quality. Putting two and two together, I came to the conclusion that much of this was due to the lamb.

As a further experiment I purchased eight other lambs. These, too, were turned into the pecan groves, being shifted from one to another occasionally to give them the benefit of grazing. I now have quite a number of sheep, and the droppings from the drove has served as the very finest fertilizer for the pecan trees. The soil has become richer, the grass more luxuriant for the sheep's benefit, and the pecan trees have taken on a new life, the fruit improving far beyond any one's imagination.

I very quickly came to the conclusion that sheep were one of the best assistants to the pecan's growth that could possibly be secured. I recently planted oats in the ground about the pecan trees and this has come out beautifully and profitably as a food for the sheep.

Profit from the Wool

While the pecan trees were being benefited and the sheep increasing and all without any attention because of the mild climate, the same as exists in the Mobile section, I also found that the sheep were bringing a clear profit from wool. Some of my men calling my attention to the fact that the sheep needed shearing I told them to go to it and they brought in, to my surprise, three croker sacks full. This I sent to a mill in Leakesville, N. C., and later received six fine automobile lap rugs which were valued at from \$6 to \$10 each. Of course I could have gotten the amount in cash, but learning the factory generally made such goods and was willing to make it

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Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

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Season 1917-18

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PECAN TREES

As GOOD as can be grown

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Pecan
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Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

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Pecan Trees

Satsuma Oranges

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Other Citrus Trees

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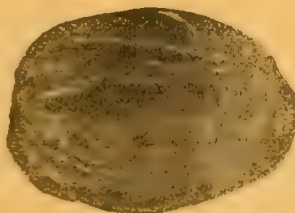
Turkey Creek

Nursery Company,

Box 21.

Macclenny, Fla

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

up for a share of the wool I let the mill people do what they thought best in the matter.

I merely speak of the sheep in connection with the pecan industry because of my experience. I realized more than 100 per cent in increase of sheep, my pecan trees gave much better fruit and more of it and the trees are thriving right along and all this with no need for extra attention to the sheep. If the pecan and citrus growers of this section try the experiment I believe they will find in it a greater profit than they realize. I believe it is destined to make for good growing sheep and improving the pecans and at the same time increasing the bank accounts of the growers.—H. D. Money, Ocean Springs, Miss.

BOOKS AND CATALOGUES

A book of particular and timely interest is the "Awakening of Business," by Edward N. Hurley, of the Federal Trade Commission. Although issued just prior to the country's entrance into the world war, it is suggestive and educational to an unusual extent, and business men who keep abreast with the rapid changes will find it of much practical value.

The price of the volume, which contains about three hundred pages, is \$2.00. Orders can be filled through The Nut-Grower Book Department.

ITEMS OF INTEREST

Crop reports from different sections of the pecan belt indicate a promising yield this season, although some localities are not up to the average.

Mr. Z. R. Pettet, Georgia Field Agent, Bureau of Crop Estimates, with headquarters at Atlanta, Ga., was a recent caller at the Nut-Grower office.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XVI

August, 1917

Number 5



GOD give us men. The time demands strong minds, great hearts, true, faith and willing hands men whom the lust of office does not kill; men whom the spoils of office cannot buy; men who possess opinions and a will; men who have honor; men who will not lie; men who can stand before a demagogue and damn his treacherous flatteries without winking; tall men, sun-crowned, who live above the fog in public duty and in private thinking! For while the rabble with their thumb-worn creeds, their large professions and their little deeds, mingle in selfish strife, lo! Freedom weeps! Wrong rules the land, and waiting justice sleeps!—
J. G. Holland.

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Pecan Trees

Budded Paper Shells
Best Varieties
 Expert Propagation
 Healthy and Hardy Stock

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15,000 Pounds Pecans

We expect to have for sale 15,000 pounds of the highest grade, standard size and weight pecans, as follows:

Schley	8,000 lbs.
Stuart	3,000 lbs.
Van Deman	2,500 lbs.
Frotscher	2,000 lbs.

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Deliveries October 15th and
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Groves: Baconton, Ga.
 Offices: Florence, S. C.
 JAS. D. EVANS, President

PECAN OR HICKORY-NUT WEEVIL

Sometime ago numerous inquiries as to the cause of the holes in pecan nuts were made, and these were found in every case to be due to the attack of this species, which closely resembles the well known chestnut "worms" or weevils. Correspondence now shows that injury has decreased considerably, but I am informed by Mr. Fiske that the beetles are still as numerous as ever and quite destructive to hickory in some parts of the South. Wild pecans are more favored than the orchard varieties. Considerable shortage was reported during the past few years in Texas and Mississippi, while in Georgia in one locality seventy-five per cent of one crop was a failure.

The remedy is to store the infested nuts in tight receptacles

(Continued on page 72)

The W. B. Dukes Pecan Farm Moultrie, Georgia

Growers and
 Shippers of

FANCY PAPER SHELL PECANS

One million grafts and buds of Schley
 Stuart, Delmas and Moneymaker.
 Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
 Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

VOL. XVI

WAYCROSS, GA., AUGUST, 1917

NO. 5

SOME PECAN STATISTICS

By J. M. PATTERSON

Read at the 1917 Meeting of the Georgia-Florida Pecan Association, at
Thomasville, Ga., May 31, 1917

STATISTICS are bone dry. Therefore the subject assigned me is exceedingly difficult to discuss because it does not permit of theorizing, imagining, or prophesying. It limits me to actual facts.

Some ten years ago I wrote (as did most of you) some guesses as to what a pecan orchard might be expected to do when it reached the age of fruitage. At that time the only facts obtainable were the records of a lone tree here and there. This left plenty of room for the play of the imagination—and how some real active imaginations did play!

I have in my office a choice collection of literature from the pens of promoters and others (some nurserymen) issued eight to ten years ago. Here are some of the predictions (not promises) made by the various individuals and companies. I give only the yield in pounds per tree at various ages as I have gleaned from these various bureaus of pecan estimates:

3rd	4th	5th	6th	7th	8th	9th	10th	11th
		1-3	4-10	10-25	20-45	35-60	60-85	85-100
1	5	20	30	40	60	70	70	80
		10	10	25	45	70	100	
	1	3	10	25	45	70	100	

It is needless to say that the above estimates were made by promoters who are long since out of business (as they should be).

One promoter quoted one of our distinguished nurserymen as having said: "Budded and grafted paper shell pecan trees at eight to ten years will yield from 50 to 100 pounds per tree"

A bulletin issued by the Agricultural Experiment Station of one the adjoining states in 1911, made the following statement: "Budded and graft-

ed pecan trees have made the following record yield:

5th Year	-----	10 lbs.
6th Year	-----	15 lbs.
7th Year	-----	25 lbs.
10th Year	-----	50 to 100 lbs.

Is it any wonder the promoters' imaginations took aeroplane flights?

It is generally conceded that an enthusiastic salesman, promoter or insurance agent are not to be taken seriously in all their statements. By common consent they are permitted to paint a little patch of blue sky, and in fact, the general public seems to rather enjoy hearing men indulge "poetic license" in describing their wares. In view of "actual results," as the insurance man says, when he comes around to sell a twenty-year endowment policy, and the dividends are about one-fifth of what the company or agent, or both, induced the insured to believe he would realize—the pecan men may now settle down to the fact that the pecan tree has not justified our prophecies.

Not that the pecan tree has not made good - it has, and we have every reason to believe that in the long run it will much more than make good; or, to put it another way, it will make good up to the fondest hopes of any sane man; but the facts are, the pecan tree has not made good the prophecies of the pioneer pecan boosters in the early stages of the life of the tree. In other words, the pecan tree is not as precocious as we had hoped and believed it would be. There is an old saying, "One swallow does not make a summer." So we have learned that the record of an individual pecan tree here and there does not furnish a safe basis for predicting the yield of a large orchard, and

that is what interests us. And our inquiry after "actual results" has been on this basis.

The result from an exceptional tree is interesting as showing the maximum possibilities of a pecan tree, but the actual average yield of hundreds of acres is more interesting as showing the probabilities of a pecan orchard.

The pecan industry has suffered from the extravagant representations (or rather misrepresentations) of unscrupulous people who saw a chance to get rich quick out of the credulity and gullibility of the general public—capitalizing the infant pecan industry to accomplish this bit of high finance.

But that is nothing against the industry. What business or industry is there in which fakirs do not endeavor to reap a harvest? Elbert Hubbard once said: "Imitation is a by-product of success."

In the early stages of the development of the pecan industry a few nurserymen and a few "so-called" promoters of commercial orchards seemed to be making a splendid success. This was the signal for the entrance into the nursery and orchard business of a fine crop of men who had neither moral nor financial responsibility. They were fakirs pure and simple.

The wrecks of these enterprises are now strewn along the path of the splendid and substantial progress of the pecan industry, which is now on a firm basis and is fast appealing to conservative business men and capitalists as a safe and profitable investment.

In the effort to find the facts, we have discovered that very few owners of orchards have kept definite records. The actual statistics I am about to give you are from five orchards under the management of four different individuals or companies. I may say that these statistics are from orchards ranging in size from 125 acres to 500 acres each. I give you the average yield per tree in pounds (assuming that all orchards have twenty trees per acre), in the various years:

Orchards	6th Year	7th Year	8th Year	9th Year	10th Year	11th Year	12th Year	13th Year
S		.50	1.5		5.2			
A	.4	1.35	1.4	4.3				
D			.4	1.5	3	7		
V		.30	.7	1	2.3			
B			1	1.8	2.5	5.2	5.3	9.6

The age of the trees are all based on the date of the original planting of the orchards. We all know that the average orchard has many replants ranging from 10 per cent to 50 per cent, or even more.

Another factor entering into the situation is

that for the past four or five years, the very period during which the above records were being made, the sections in which the orchards are located suffered from irregular and also insufficient rain fall. They were not normal seasons.

PECAN YIELDS COMPARED WITH WALNUTS

The English walnut orchards of California have long been considered a splendid property.

I am creditably informed that a walnut grove that is approaching the age of full bearing never brings less than \$800 to \$1,500 per acre, and where the orchards are desirably located and first class in every way, the price frequently runs as high as \$3,000 per acre. These prices are based on actual income derived from the orchards. This may give us a line on the prospective value of a pecan grove in full bearing.

The walnut, like the pecan, does not reach its maximum bearing until about 20 to 25 years of age. The pertinent question then is—what is the average production in pounds and dollars of a walnut grove at given ages?

I have in my office a recent issue of "The Walnut Book," a publication of the Pacific Coast, in which there is an article by a professor of the Oregon Agricultural College, in which he discusses the yields, prices and returns from walnut groves. Permit me to quote you this article:

"Probably ten pounds is a fair estimate for the average yield of trees nine to twelve years old. This is the equivalent of 200 pounds to the acre. Twenty pounds per tree, or 400 pounds per acre, is probably not far from what may be expected on the average from trees 13 to 20 years old. Fifty pounds per tree, or one-half ton per acre is a fair estimate for old orchards. Many will object to these figures as being too low, illustrations being afforded of single trees 25 to 30 years old that some years bear 200 or 300 pounds, or that even average 100 to 150 pounds season after season. It will be found, however, that nut growers having large plantations are very well satisfied when they secure an average of one-half ton per acre from their entire acreage of trees over 20 years old."

Let us now compare these figures with the yield of pecan orchards. The article is silent as to yields of orchards under nine years of age. It says ten pounds is a fair estimate for average yield of trees 9 to 12 years old. These figures are higher than the average yield of pecan orchards 9 to 10 years old—as we have been able to obtain the figures. But we have not been able to secure data on any considerable average over 10 years of age.

One of these orchards shows 3 pounds per tree at 10 years, and 7 pounds per tree at 11 years, and this same orchard promises in its 12th year to more than double the yield at 11 years of age.

Another orchard on which we have definite data (said orchard containing nearly 400 acres) increased its yield from 1.7 pounds in its 9th year to 5.2 pounds per tree in its 10th year. The rate of increase you will note is very rapid. It should be further noted that in this particular orchard there are an excessive number of replants—something like 55 per cent—so that as a matter of fact the trees average more than 1 year younger than the ages given.

Still another orchard on which we have definite data, containing about 125 acres, increased from 3 pounds per tree at 10 years to 7 pounds per tree the 11th year.

I am not informed definitely as to whether the walnut is as difficult to transplant as the pecan, but my understanding is that the walnut is a much easier tree to transplant than the pecan and that the number of replants in the average walnut orchard is not nearly so great as in the average pecan orchard. Therefore, the comparison does scant justice to the pecan, because at a given number of years after the original planting of a walnut orchard, the average age of the trees will be considerably older than the average age of the trees in a pecan orchard originally planted the same year.

Now let us look at the comparative returns in dollars and cents. The same article from which I have quoted in the foregoing, says: "14 cents per pound may be regarded as a fair average price year in and year out." I have not been able to secure actual data on the actual price obtained for pecans during the past few years. However, I do know that the average price obtained in 1916 by one concern representing a large acreage was in excess of 33 cents per pound. This you will all understand was the average for all varieties and grades produced. This is more than twice the average price obtained for walnuts according to the representations of the author quoted. I am of the opinion, however, that for the 1916 crop the walnut growers obtained an average price of more than 14 cents per pound. It is therefore safe to say that the average prices obtained for pecans is double the price obtained for walnuts.

Suppose, therefore, that we say the average yield of a walnut orchard from 10 to 12 years old is 10 pounds per tree, and the average price obtained is 15 cents. This would mean \$1.50 per tree, or \$30 per acre. For the sake of argument, suppose we grant that the average yield of a pecan

orchard from 10 to 12 years of age is 7 pounds per tree as against 10 pounds for the walnuts, and the average price is 30 cents per pound, the pecan tree gives \$2.10 per tree or \$44.20 per acre—a difference in favor of the pecan of 60 cents per tree, or \$12.00 per acre.

The same author says that the average yield of a walnut grove 13 to 20 years of age may be expected to be about 20 pounds per tree. We have no data on the average yield of pecan orchards 13 to 20 years old, but does any one doubt that a pecan orchard properly cared for will average 20 pounds to the tree from 13 to 20 years? It seems to me this yield is quite reasonable to expect, and while, for the sake of argument, we admit that the price of pecans will be reduced as the production increases, or if the present scarcity and big expenses continue, that the price of walnuts will increase. In short, that the difference in prices obtainable for walnuts and pecans will grow somewhat less; yet even granting all this, it is still obvious that a pecan orchard promises actual results in dollars and cents a little higher than the average walnut orchard.

An average orchard of which we have definite knowledge, in its 10th year, produced in cash returns \$23.25 per acre. This orchard contains nearly 400 acres, and over 50 per cent of replants. It is perfectly fair to say that this orchard in the next two years will more than double its cash returns. This based on the rate of increase during the past two years. In other words, that at 12 years of age it will pay from \$45 to \$50 per acre. These are gross figures, and from them must be deducted cost of production and marketing.

There is ample evidence that a pecan orchard will greatly increase its production between the ages of 12 and 20 years. That it will double its production in this period is a conservative estimate. This would mean a return of \$100 per acre, or \$75 to \$80 per acre net, which would mean 10 per cent on a valuation of \$750 to \$800 per acre. Please note that the actual results I have given you in this instance are from an average orchard of approximately 400 acres, and not from a small pampered orchard.

After 20 years of age, the pecan orchard, as the walnut orchard, may be expected to yield from 30 pounds to 50 pounds per tree. This, however, is going more definitely into the realm of prophecy, for we have no orchards of cultivated pecans that have attained an age of 20 years, so far as we know.

The writer, however, may say by way of parenthesis, that from 198 seedling trees in 1916,

(Continued on page 71)

The Nut-Grower

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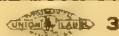
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The nut power cracking machines, which have in the past been closely screened from public inspection will sooner or later be brought into more public and general use. For the first time we have recently received an advertising contract for one of these machines.

In another column we give extracts from a letter from a Chicago subscriber. Expressions of appreciation like this go a long way in lightening up the clouds which hover round the busy editor. We have known in a general way for years that we are helpful to those who avail themselves of our service, but it is seldom that both barrels of a complimentary gun are turned loose as in this particular instance.

As another pecan crop will soon be ready for market, the ever present question of grades and standards will be demanding attention. Pecans are no exception to the rule that products of any kind sell the most readily and for the best prices when graded so as to give the purchaser a knowledge of the true value of the shipment. In succeeding numbers we will have more or less information bearing on this matter available for use, particularly adapted to the farmer or small orchard growers, who will be encouraged to use the home market and mail order opportunities at hand for disposing of their crops.

There is no disguising the fact that generous care and abundant plant food will produce wonderful results in the pecan orchard. With live stock, pedigreed animals, generous and well balanced

rations and scientific care are essential to success. The pecan responds with equally profitable results. It is true that a pecan tree will live and eventually bear more or less fruit. The trouble is that too many people are willing to "let well enough alone" rather than move forward for better things. The ninety woods cow and the razor-back hog may suit people who are not willing to make the effort for better things and larger profits.

THE PECAN ORCHARD

The properly planned orchard, well cared for, by the use of the land for immediate crops, need not involve an outlay of more than \$100 per acre. While nuts are in evidence as early as the fourth and fifth years, profits come with the seventh and eighth years, while by the tenth year gross returns of \$100 are being obtained, and the increase in yield for the next ten years is large.

Earlier profits are made by sales of orchards from two to five years old, as the value enhances at the conceded rate of fifty dollars per acre a year. This would return double the cost of orchard in two years.

THE PERSONAL TOUCH

A great many people are interested in the pecan in a general way. A few of them subscribe for and read The Nut Grower, and their success and satisfaction is in marked contrast with that of many others who go into a new and perplexing business before becoming familiar with the fundamental principles underlying the industry as is now well established in widely separated districts of the pecan belt.

The Nut-Grower, in following up its policy of service is adopting the term of "personal touch" for imparting instruction and giving inspiration to the pecan movement among farmers and the common people upon whom rests so largely the burden of producing the food for the nations of the world. The initial meeting of a series of local conferences is booked for Waycross about the last of August or early in September, at which the exercises will partake of the general nature of a farmers' institute in special reference to the ways in which the farmer profits by growing a few trees or a small orchard as an adjunct to his ordinary operations. It is supposed that farmers and others can be reached this way effectively and conveniently. As they recognize what this nut is they will furnish new material for the nut growing organizations and become helpers in other ways.

SOME PECAN STATISTICS

(Continued from page 69)

he sold nuts for the sum of \$1,560.00, which, on the basis of 20 trees to the acre, gave a net income of over \$125.00 per acre.

COST OF PRODUCTION

The cost of production—orchard-care, gathering and marketing, is less for a large acreage than it is for a small acreage.

I am fully aware that the argument has frequently been made that large commercial orchards will not pay as well as small orchards personally cared for by the owners. Of course, this may, and doubtless will, be true of the large commercial orchards that are not honestly and economically managed. But granting the economical and honest management of the large commercial orchard, it will pay more in net returns than the small orchard managed by the owner. Incidentally, I may be pardoned for saying that the figures I have been able to collect on actual yields show most decidedly in favor of the large commercial orchard cared for, gathered and marketed as an entirety, as against the privately owned and managed orchard. There may be other details which have entered into the situation which should be taken into account, and doubtless not all commercial orchards would show the same comparative results, but so far as the facts we have been able to obtain are concerned, the large commercial orchard at the same

age has the best of the privately owned and operated orchard nearly, if not quite, two to one.

It has been said that comparisons are odious. Let me disclaim any thought of belittling the English walnut orchard. On the other hand, let me say I congratulate the walnut growers on their splendid success, and also that I will be proud to see the day when the pecan industry has in operation a plan of marketing that will even approach the California Walnut Growers Association.

With these thoughts in mind, let me call your attention to the fact that by comparison the pecan industry has made a splendid showing. The walnut growers have had years and years of experience in planting and developing orchards and marketing their product, while the pecan growers have been going through the trying period of infancy with all the trials of colic and teeth cutting, etc.

Walnut growers are experts as the result of experience. We are novices just getting experience, and we may reasonably expect that with the lessons learned in the school of experience we will do much better in future than in the past.

In the line of pecan publicity The Nut Grower has slated five or six live issues which will be given a wide circulation in the form of reprints in convenient leaflet size to be used by our advertisers and others as envelope enclosures.

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Jacksonville, Fla.**

IN WRITING TO ADVERTISERS, MENTION THE NUT-GROWER

PECAN OR HICKORY-NUT WEEVIL

Continued from page 69

so that the larvae, or "worms," when issuing from the nuts soon after they are gathered, will not be able to enter the ground for transformation. After crawling about the bottoms of the receptacles they soon die. After the main crop has been gathered hogs should be allowed access to the pecan grove, where they will root up and destroy many weevils. Poultry are also of value for this purpose. Bisulphid of carbon has been found a perfect remedy for "worms" in chestnuts, but, although an effort has been made to test this against the pecan weevil, we cannot state from experience its effects. It is probable, however, it will be quite effective in the case of the thinner shelled varieties, using the bisulphid rather strongly with with a considerable exposure and in a perfectly tight receptacle, a tablespoonful or less to each cubic foot with an exposure of two or three days will probably suffice. In the treatment of the pecan weevil it is really necessary to collect and destroy the infested wild pecans and hickory as well as if these occur in the vicinity of extensive orchards, otherwise the insects will spread from the wild to the cultivated trees.—F. H. CHITTENDEN.

MY EXPERIENCE IN TOP- WORKING HICKORIES TO PECANS

In 1909, through Dean Kyle, of our A. and M. College, I secured the services of Mr. G. H. Blackmon, then a student of the college, to come to my place and bud some pecans and hickories. I had previously prepared the hickories, which ranged in sizes

all the way from sprouts to bearing trees, 15 to 18 inches in diameter. The work was done in June and July, and a very large per cent of the buds took and grew. Some of the larger trees budded produced a few pecans in 1911, including two or three budded on sprouts from one to two inches at the ground, which had sprung up from stumps near, and had a large root system. The crop has increased each year, on the average, and some of them are now bearing profitable crops. In 1910 I had a number of hickories budded to pecans, and some each year since that time, and I now have several hundred top-worked hickories growing, and something like one hundred of them are in bearing. Last year I gathered from some Delmas top-worked hickories as much as ten pounds or more of good nuts from trees budded in July, 1910. The nuts were of fine flavor, well filled out, and of good size and weight, running from 45 to 50 to the pound.

Many of my early budded trees were budded largely to West Texas pecans, such as the San Saba, Sovereign, Halbert Hollis, etc., and none of them do well in my section of the country, and are especially unsuitable for hickory work in East Texas.

I also made the mistake of using a number of pecans of more Eastern origin which are not valuable, or are unsuited for working on hickories, such as we have in East Texas.

I would not recommend even the Stuart, the most widely planted of all commercial pecans, for hickory work. Any way, they have not done well for me, and the nuts produced are considerably smaller than those grown on pecans.

I came to the conclusion several years ago that the pecans grown on hickory roots were

somewhat smaller than those grown on pecan roots. I have more recently been convinced that the variation in size was influenced more by situation, cultivation and soil fertility than anything else. I think, too, that the variety of pecans has much to do with that question, as it has with other features of

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of pecan growing. I do not believe, therefore, that it necessarily follows that a variety of pecans which may succeed well in a given locality on pecan will do so on hickory. We must make trials and experiments along this line, and there is much to learn about it yet.

A certain variety of pecans may have a closer affinity for certain kinds of varieties of hickories, and when these are all established, I believe that the growing of pecans on hickories can and will be made quite successful over a large portion of this state, and over much of the South.

I have talked to a number of persons who have top-worked hickories in a small way in East Texas, who expressed more or less doubt as to the success of it, and in each instance they had

used varieties which have failed for me, or the situation was unfavorable. And yet, I can show as pretty pecans on hickories, with as good and as perfect unions, as can be shown by any one on pecan roots, and I will show as good crops of nuts for size and age of trees, against pecans on pecans, where conditions are equal.

Of course, top-worked hickories out in the brush, and in neglected situations are failures without regard to what variety of pecans were used to top-work them, and such trees would be failures as hickory-nut trees, if they had been left alone.

We must not forget that simply top-working a tree does not change its conditions, and that top-working one to a pecan will not enable it to produce pecans in a situation and condition in

which it could not and would not have produced hickory nuts. Many men appear to overlook this fact, as patent as it should be to every one. One traveling through the woods of East Texas will soon observe that the crowded hickory trees bear few nuts, and they are, as a rule, faulty. But he will notice that trees out in the open, with plenty of room and fair soil, produce good crops of nuts of good quality. The same is true of the pecan. Not only this, but we all know that the trees in the cultivated lands, or along the fence rows where they can send their roots out into the cultivated soil, are the best and most regular bearers of all. This being true, the way to success is pointed out by nature.

Pecans respond as freely to good treatment and to fertilization and cultivation as any other crop, and with these and plenty of moisture, which can ordinarily be had by cultivation in East Texas, he will succeed with the proper varieties of pecans, whether on pecan or hickory roots.

As I am called on to give my experience in top-working hickories to pecans, I do not deem it necessary to discuss the methods or manner of such top-working, as there is no difference in the methods of top-working seedling pecans to the commercial varieties and hickories. The different methods have been discussed very generally of late by men who are better as to such work than I am. I have found the ring budding method quite successful, and also the chip and patch bud, and the recent introduction of the bark grafting, worked out by Dr. A. Caswell Ellis, of the Texas University Extension Department, with the assistance of Messrs. Edwards, of Dallas, and Burkett, of our

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State Department of Agriculture, has been a decided success with me, and this method has greatly increased the opportunities to do such work, making it possible, in connection with other methods, to do something along this line throughout most of the year.

Mr. Burkett is making a special study of all the methods in use, and of their application to all kinds of stocks and varieties, and his work, will, in my opinion, result in much good to the industry, and to the prosperity and welfare of the state. All this work is of comparatively recent date, and we are making progress, day by day, and the people of the state are greatly indebted to the pioneers in this great work; and much of the credit is due and belongs to a number of the members of the Texas State Horticultural Society, so well known that it is unnecessary for me to name them, a thing I would not like to do, lest in calling over their names I might not be able to name them in the order of merit to which each is entitled. And so we will class them all as benefactors to Texas and to the human race, for such they are.

I am not prepared to give a list of varieties of the commercial sorts of pecans one should use in top-working hickories, even in my own territory, as I have not tested all the well known varieties even, much less the many of lesser note, some of which may be very successful when tried out. I have had good results from Delmas, Schley, Money Maker, Van Deman, Pabst, and some others, but some of these are better than others, taking into consideration their bearing qualities, flavor, size, etc. My favorite at present is the Delmas, and, while the Delmas has been found very subject

to scab in many sections, and in the vicinity where it originated, it has shown no symptoms as yet with us, and it is both prolific and of fine quality, ranking next after the Schley in that respect.

The Schley probably possesses the highest qualities as an eating pecan, and probably sells for the best price of any variety, and while it grows readily on our hickories and bears fair crops, its general defects follow it on hickory as well as on pecans, to wit: Its variableness in size, even on the same tree, and the fact that though a rather regular bearer, it is not a prolific one, as a rule.

I do not find that the top-working of a pecan on hickory stocks affects the thickness of the shell or the flavor of the nut. The sole gain in top-working to hickories lies in the time saving to produce nuts. A small sprout or tree having a root system established and growing, when top-worked and given proper treatment, will begin bearing several years sooner than a transplanted tree, and I would say that some five years or more can thus be gained by top-working the trees found where they can be left to grow, over transplanting pecan trees.

I find that more nuts will be obtained in a few years when the larger trees are top-worked, but that more of the large top-worked trees are lost from bad unions and from breaking off after growing new tops, and that it is much more expensive and difficult to top-work the large trees; that the small trees soon produce bearing trees and are more easily handled, make better trees and are best for permanent trees. Where one has both kinds together it would not be bad to work both and use the larger top-worked tree for nuts until the smaller one needs the room, and then

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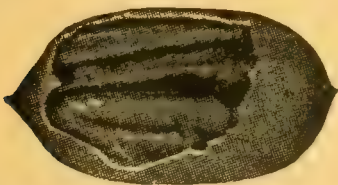
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For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

cut out the larger one, leaving the smaller and better shaped one for the permanent tree. It would not be a bad idea in top-working a hickory grove to plant pecan seeds in the grove and top-work them for use after using the top-worked hickories until the younger trees need the room. You cannot have too many nut trees—especially pecans—anywhere they will grow. They are beautiful to look upon, and besides, furnish us a most delicious and nourishing food.—**JUDGE FRANK B. GUINN,** Rusk, Texas.

NUT GROWERS TO HOLD MEETING

Announcement is made that a conference will be held at the Municipal Building, Waycross, Ga., Wednesday, Sept. 5, 1917 beginning at 10 o'clock a. m., in the interest of pecan culture in the Southeast.

Farmers, nut growers, business men, ladies and others interested are cordially invited to attend.

The fact that great advances have been made during the past few years in the selection and propagation of varieties of fine quality and abundant bearing and that they can be grown commercially only in lower south,

makes the pecan a highly attractive proposition.

This conference is under the auspices of The Nut Grower, with the co-operation of the Waycross Chamber of Commerce and a number of men who recognize the pecan as a splendid natural product having great commercial importance, as well as being a factor in the permanent food supply for the near future.

At this conference, in which speakers of national prominence in the pecan world will take part, the program is planned so as to make the meeting of particular interest and especially helpful to farmers who can more readily avail themselves of profits in growing pecans than any other class.

It is the desire of The Nut Grower to accord to the citizens of this locality a full measure of the information and inspiration that otherwise is available to but few who can bear the expense in time and money required to attend the more pretentious conventions held in other sections of the pecan belt.

Unless it is the desire of those attending, no move will be made to form a pecan organization. There will be no registration fee, no collection taken for expenses and no call for membership.

Two sessions will be held. Aside from the formal addresses the discussion of practical points and the answering of questions will be features.

We are confident that the occasion will be of much interest and profit to all those interested in this line of advanced agriculture as well as to the prospective investor who needs to know from authoritative sources the commercial opportunities the industry offers in this locality, which is peculiarly suited to growing the finest pecans.

WHAT ARE YOU GOING TO TOP-WORK WITH?

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Reliable
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INTRODUCER

BLACKSHEAR, GEORGIA

PRIZES FOR NUT TREES

In the interest of science and of American horticulture the Northern Nut Growers' Association is seeking, and preserving by propagation, the fine and valuable nut trees of this country. To this end it continues its contests of previous years with the following list of prizes:

Black walnut, shagbark hickory, shellbark hickory, northern pecan, (native to Iowa, Illinois, Ohio, Indiana or other northern state) native hazel, Japanese walnuts, and hybrids, for each \$5 first, \$3 second, \$2 third, total \$70.00.

Butternut, Bixby prize, \$5 first, \$3 second, \$2 third and five prizes of \$1 each, total \$15.

Jones prize of \$50 for an American hazel that can compete with the imported hazel or filbert.

Bowdich prize of \$25 for a shagbark hickory better than those now being propagated.

Reed prize of \$10 for a northern pecan better than those now being propagated.

Weber prize of \$10 for a black walnut better than those now being propagated.

F. A. Bartlett prize of \$15 for a blight resistant American chestnut.

Morris prize of \$10 for a beech nut worthy of propagation. Total \$120.00.

Prize winners must furnish one lot of scions or cuttings, for experimental propagation, at the request of the Association. Valuable nuts are named after the sender and the name goes on permanent record. Send at least a dozen nuts from each tree so that no mistake can be made. If more than one variety is sent mark each variety by name or number. Send the nuts by mail carefully packed in a box or bag containing a slip with the name and address of the sender plain-

ly written in ink. The contest closes December 31, 1917. Send the nuts and correspondence to Dr. W. C. Deming, Secretary, Georgetown, Conn.

THE PALM KERNEL INDUSTRY

The end of 1914 found the Hull mills experimenting with palm kernels, copra, and peanuts, materials not hitherto dealt with here. During 1915 the palm kernel became established as a staple of the Hull trade. During the year 44,050 long tons were imported into Hull out of 206,715 tons imported into the United Kingdom, the rest (162,665 tons) going to Liverpool. In January and February, 1916, 8,368 tons reached Hull. Before the war Liverpool was the only British center that dealt with palm kernels, and in 1913 only 36,012 tons arrived there. The palm kernel industry was centered in Germany, but since August, 1914, the bulk of the West African output of palm kernels has come to England. A few shipments have gone directly from Africa to the United States. The ultimate success of the industry may depend on the results of the present efforts to develop a sufficient demand for palm kernel cake among British farmers.—Report of Consul at Hull, England, Daily Consular and Trade Reports.

UNDISCOVERED WEALTH

No one who has seen the English walnut groves of California but has admired them. They are things of beauty as well as of profit to their owners. And yet we have in the pecan something which for the South Atlantic and Gulf States is just as profitable as are the English walnuts of California, the orange

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

FOR SALE

Grafting Wood of Stuart, Frotscher, Teche. MRS. M. L. RANDOLPH, Bayou Goula, La., "Blythewood Pecan Grove." 10-6

For Sale—220 acres 25 miles south-east of Mobile, 1 1-2 miles to boat landing, 130 acres fenced and cleared. Buildings. 1500 Satsuma oranges, 600 pecans, 500 peach, 125 pears, 175 other trees in orchard in thrifty condition. 5000 trees in nursery. Dry, healthy location. J. S. GAYLORD, Magnolia Springs, Ala.

Budded and Grafted Hardy Northern Nut Trees for northern planting. Write for catalogue. INDIANA NUT NURSERY, J. F. Wilkinson, proprietor, Rockport, Ind. 9-4

Budded Pecans

PRICES REASONABLE. FINE PEACH TREES 8 CENTS. KEIFFER PEARS 10 CENTS. GET CATALOGUE.

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In the HEART
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Pecan Belt

We have all the leading Texas and Southern varieties of pecans Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

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STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right.

Chas. Crossland, Bennetsville, S. C.

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For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

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and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butter-nuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

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THE NUT SPECIALIST

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Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

Ocean Springs :: Mississippi

As an advertising medium, The Nut-Grower pays those who have attractive offerings in the line the publication represents.

trees of Florida, or the apple orchards of the Rogue River Valley. Our people as a whole are just beginning to awake to the fact that they have this undeveloped possibility of wealth right in our midst. Many have already learned that even a few trees around a home increase its attractiveness and comfort; and in addition to furnishing the most palatable and nutritious food, the sale of the surplus nuts gives many an easily-earned dollar to supply other comforts and necessities of life. When our people learn this, and pecan trees are found growing about every city and country home where there is room enough for even one tree, we will have made a long step forward towards our economic and financial betterment.—
J. B. WIGHT.

DYNAMITE FOR FRUIT TREES

* This is a comparatively new fruit growing section, and we may have considerable to learn about the business. I find that the younger men in a business—the newcomer if you will—are more willing to try out new ideas than the old timers who feel that their experience has taught them all there is to know in their line; in this way the newcomer often times hits upon something valuable in the way of a method.

When other fruit growers have any valuable information, I like to be let in on it; when I have any I am glad to pass it around for the benefit of others in the business.

Since I have been growing peaches and apples, I have had dynamite for blowing holes to set trees. As a result, I would rather buy and pay for dynamite to blast holes for my trees than to let a man come in and

dig holes two feet square and set my trees free of charge. I say this unreservedly because I have tried both ways.

Blasting tree holes is quickly and easily done. An inch and a half bore hole twenty-four to thirty inches deep. A quarter pound charge of dynamite well tamped in the hole. Dig out the loose dirt after the shot; fill the pot-hole in the bottom to prevent future settling; set your tree at the proper depth; tramp down the earth round it and the job is done.—**W. A. Shore.**

DIE-BACK

A condition which can well be described as die-back is of occasional occurrence and can well be noted in a paper of this sort.

The trouble has only been observed on old seedling trees at one point in Louisiana and one in Georgia. The limbs died back from the tips slowly throughout the summer. The dead branches show no evidence of parasitic organisms, nor was there any malformation of the leaves or other symptoms that showed any relation to rosette.

The condition is apparently due to adverse soil and seasonal conditions and cannot be considered serious.

One of the blessings in disguise which was visited on the coastal plains country by the extreme cold of the past winter is the demonstration that the Satsuma orange survives with but slight or temporary injury from our most severe cold. This should give confidence to the rapid and large developments under way with this fruit. A few people have known for years that the southeast has equal opportunities with lower California for producing oranges, besides certain advantages over that far-away section.

BOOKS AND CATALOGUES

Nebraska Horticulture is an interesting monthly publication by the Nebraska Horticultural Society, Capital Building, Lincoln, Neb.

Annual Report of the Agricultural Experiment Station, University of Florida, for the year ending June 30, 1916, contains a report of observation on "Pecan Die-Back."

The Annual Report of the University of Florida Agricultural Experiment Station gives much space to consideration of citrus experimentation and the testing of farm plants. It makes a volume of over a hundred pages and the subject matter is carefully indexed, making it convenient as a reference work.

The Industrial and Agricultural Department of the A. C. L. Railway is sending out a finely illustrated pamphlet descriptive of the agricultural and live stock advantages of the territory traversed by this line, which is aptly styled "The Garden Spot of the World." Wilbur McCoy, Jacksonville, Fla., can furnish copies.

"The Propagation of Pecans," by J. H. Burkett, is issued by the Texas Department of Agriculture as Bulletin Number 55, under date of March 1917. This is a thirty-page illustrated pamphlet giving particular attention to top-working pecans and hickory, and exploits the availability of chip and patch budding as being most available for amateur work. Copies can be obtained from Fred W. Davis, Commissioner of Agriculture, Austin, Texas.

ITEMS OF INTEREST

The 1917 pecan crop in the Southwest Georgia district is estimated to be from 50 to 60 per cent of last year's yield.

Jefferson County Pecan and Live Stock Company

Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

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A number of fine 8 to 12 foot Budded Pecan Trees of the leading varieties; a number of 3 to 5 foot Budded Pecan Trees; 3,000 June Buds at big bargain.

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HEALTHY, WELL-GROWN NURSERY STOCK. STANDARD VARIETIES FOR SALE. REASONABLE PRICES. WRITE FOR PRICE LIST

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And as CHEAP
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be grown...

J. B. WIGHT, Cairo, Ga.



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Pecan
Trees



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Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

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Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

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Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

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Macclenny, Fla.

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

The Citronelle Nursery and Orchard Company, whose advertisement appears in this number, has established a branch nursery at Brunswick, Ga., where they will specialize in Sasuma oranges and trifoliate stock.

Our readers are urged to study their pecan trees carefully and note and report to us any insect or fungus trouble that they discover. This opens a way for suggesting a remedy, if known, for the depredation of new enemies.

An interested subscriber recently, in renewing his subscription, said: "I wish to say that The Nut-Grower is the only paper I can put any faith in for truth. If I had known The Nut-Grower earlier than I began receiving it, I now could have sent you a thousand dollars and had money left."

The use of leguminous plants and live stock in connection with the growing of pecan orchards continues to meet with favor. It is solving various problems and producing returns from the orchard land while the trees are reaching bearing age. Besides, the building up of the soil this way is a great help in the fertilizing which the trees need for a vigorous and rapid growth.

"The Pecan in Rural Welfare," is the subject assigned Mr. H. C. White, of Albany, Ga., for a paper to be presented at the approaching pecan conference to be held at Waycross early in September. Mr. White is one of the most influential pecan experts in the country and has directed the planting and care of a larger acreage of successful orchards than any other man in the world.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson: a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XVI

September, 1917

Number 6



AS in personal morality, liberty is self-restraint and self-indulgence is slavery, so political freedom is possible only where justice is in the seat of authority, where all orders and degrees work in harmony with the organic laws which man neither made nor can alter, where the unwise are directed by the wise, and those who are trusted with power use it for the common good.—JAMES A. FROUDE.

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Best Varieties
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 Healthy and Hardy Stock

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Schley.....	8,000 lbs.
Stuart.....	3,000 lbs.
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 CROP, OR OTHER-
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Deliveries October 15th and
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Groves: Baconton, Ga.
 Offices: Florence, S. C.
 JAS. D. EVANS, President

NEW TREE CROPS AND A NEW AGRICULTURE

We have all heard of the scientist who made a discovery and exclaimed, "Thank God! This can't be of any possible use to anybody!" This useless aspect of science in a world with so many possibilities of service does not appeal to me. I hope that science and service and utility may go hand in hand.

The conservation of natural resources, the creation of new ones is a topic which combines the qualities of science, service and utility.

Of all our resources the soil is the most vital. Most of the others have some possibility of substitution, but for the soil there is no substitute! The forest burned to destruction can rise again if the soil remains. Some examination will show that the most vital part of the whole conservation matter

(Continued on page 87)

The W. B. Dukes

Pecan Farm

Moultrie, Georgia

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**FANCY PAPER
 SHELL PECANS**

One million grafts and buds of Schley
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We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
 Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

VOL. XVI

WAYCROSS, GA., SEPTEMBER, 1917

NO. 6

WINTER KILLING OF FRUIT AND NUT TREES

By J. WILLIAM FIROR

FOR the last six years the author has observed considerable injury to fruit and nut trees from cold. The extent of injury has varied with seasons and has been most pronounced, year after year, in young pecan orchards. During the past season it was unusually large in pecan orchards; also killing many peach, apple and other trees. In some young pecan orchards the loss was as high as 50 per cent of the trees. Observations and reports from reliable sources show that these losses were not confined to any section or any type of soil. Young pecan trees were killed at Blackshear, Thomasville, in the Albany section, Dawson and Athens, which gives a wide range of conditions and soil. At Thomasville a one-year old peach orchard was practically wiped out; the same was true at Montezuma. All of these cases were examined by the writer, while county agents have reported similar losses in all of the fruit sections of the state.

Observations made in bearing orchards, especially peach, have shown an unusual number of trees dying, in some cases as high as eight per cent. Although there is little, if any, question as to the cause of the loss among young fruit and nut trees, it being generally accepted by growers and scientists as due to winter injury, there has been some question as to the cause of death among bearing peach and pecan trees. The loss of bearing peach trees has been attributed by some to the same disease that causes plum wilt; of large pecan trees, to insects. Although it is possible that plum wilt and insects have caused trees to die, it does not seem possible that that these troubles should have increased the death rate over previous years. Plum wilt has been prevalent in the state for a long time. The fungus which causes it has been considered a very virulent parasite on plums, but only attacking peaches when the trees were weakened by other causes. It is probable that trees weakened by cold would be later infected by the fungus. It is also common to find *Valsa*, another fungus, on trees

which have been weakened by borers or other troubles.

The peach industry of the state represents a very desirable income and also a heavy investment. Although there does not seem to be any reason for growers to become unduly alarmed, yet the industry is of sufficient importance for this question to be worked out at once. As to whether the plum wilt or any other disease is a menace to the peach industry is a question for a plant pathologist to decide. The question of insect damage to pecan trees is for the entomologist to work out, and fortunately representatives of the government and different states in which the pecans are grown have been investigating this and will report soon, no doubt.

The question of winter killing of young pecan, peach and apple trees is a clear-cut one, as there is no doubt of the cause. The object of this article will be to discuss this and give recommendations for preventing a repetition of the damage.

Young trees came into foliage in the spring; later the leaves turned yellow, wilted and the tree died. In some cases the tree died a few days after starting to foliage; in others they did not succumb until August; and still others died all along between those periods. These are the other symptoms of winter injury. On making a more careful examination of these trees, the twigs and main branches were found to be green and uninjured, but the cells beneath the bark in that portion of the trunk just above the soil were found to be dead, completely girdling the trees. If the examination was made early enough in the spring, it would be found that these cells in the first few inches above the soil were discolored and dead, while the roots below and the trunk with its branches above were alive. This is the common symptom, although some trees have the entire trunk and portion of the root system killed, while others in addition to being girdled would have dead spots at the crotches.

When the cells are killed deep into the sap wood, sap usually collects in this girdled portion, turning sour and giving off a disagreeable odor. The top of the tree then dies and the roots often send up growth. When the cells are not killed to any great depth under the bark, the top of the tree continues its growth late into the summer, but sprouts are thrown up from the roots. Young trees with vigorous sprouts coming from the roots show these outward signs of winter injury.

Sun scald is also a common form of winter injury. This shows a long strip on the east and south side of the tree. It is caused by the sun warming up that side of the tree, while the other side being shaded by the tree's own trunk, is of a much colder temperature. It takes place on sunny days after cold nights. It does not kill the trees as a rule, but weakens them and gives the borers a good place for entrance.

Twig killing differs from injury at the base in place only. It is sometimes, but not often severe enough to kill the trees. It affects bearing as well as young trees. It cuts off the year's crop when affecting bearing trees.

SUGGESTIONS FOR PREVENTION

1. Give the trees a long, unbroken growing season. It is the nature of deciduous trees—trees that shed their leaves—to grow during the summer and rest, remain dormant, during the winter. This is due to the season but a tree that grows continuously and steadily in summer has a tendency to remain more thoroughly dormant in winter, while one that has rested in summer has a tendency to start growing in winter, if weather conditions are suitable.

2. Have the trees mature at frost. Maturity is one of the most important features affecting the hardiness of plants. Investigation has shown that of the parts of the tree above the soil, the cells at the base are the least mature in winter. The cells in the crotches are also poorly matured sometimes. This explains the nature of the symptoms described above. To get trees to mature thoroughly, it is important to have them growing through the spring and summer and into the fall or even later. From that time until frost, it is recommended that the water supply be cut off so that the trees will produce smaller and smaller cells and will be ready to stop growing when frost comes. The sowing of a heavy crop of winter wheat will take up moisture heavily in the month of October and not so heavily in September will bring this condition about.

Wet, warm falls, following dry, hot summers often bring about a bad condition. The trees grow but little in summers, when they should be growing, and then start a belated growth in the fall. The

twigs and cells of the base will be very green and unmaturing for the winter. Cultural methods planned to overcome these conditions are desired for orchards with trees younger than five years. In bearing orchards it is not so essential.

3. Mound trees with soil late in the fall. Investigations have shown that the roots of trees are less resistant to cold than the top. Of course, the roots are seldom killed by cold in Georgia, as they are protected by soil. It is also known as mentioned above, that the cells at the base are least resistant of the parts of the trees above ground, but they are more resistant than the roots. The farther away from the base any part of the root system is located the less is its resistance to cold. If soil protects the root from being killed, it is reasonable to suppose that if placed in a mound around the trunk of the tree it would also protect it. As near as it is possible to do so, it is suggested that this mounding be done just before frost, to a height of about one foot, having the mound wide spread, about three feet through.

4. Whitewashing the trees lessens the chances of winter injury, as it keeps the temperature of the trees twigs, branches and trunks lower during warm days. White reflects more light than the natural color of the tree.

FORMULA FOR WHITEWASH

Slake one-half bushel of lime in boiling water, keep it covered; strain and add brine made by dissolving one peck of salt in warm water, and three pounds rice flour, then boil to a paste; add one-half pound whitening and one pound of glue dissolved in warm water. Mix and let stand for a few days before using.

5. Use winter cover crops, especially on light sandy soils, as they freeze more deeply than the heavier types.

It is not always possible to do the things necessary for preventing winter killing without seriously interfering with other operations, unless the orchardist, in planning an entire year's work, will take into consideration these things and work them into his plans. Some of the suggestions may prove too expensive, unless thought is given to carrying them out; for example, the mounding of the trees can be facilitated by plowing several furrows, so as to start the mounding and loosen the soil.—Bulletin Georgia State College of Agriculture.

J. William Firor, Adjunct Professor of Horticulture at the State College of Agriculture, is now at Camp Oglethorpe in the Officers Training School. This prevents his personal attendance at the Waycross Pecan Conference, but his paper on Top-Working the Pecan will doubtless be on hand.

PECANS—AN ATTRACTIVE INVESTMENT

DURING the past fifteen years a new industry has assumed remarkable proportions in the lower south. Commercial pecan orchards have been planted, exploited and sold largely in northern and western centers, bringing hundreds of thousands of dollars of new capital into the several localities known as pecan centers. This industry has many attractive features as well as much genuine merit.

The development now going on naturally follows from a new application of horticultural science, made possible by mechanical improvements in budding and grafting the pecan. Like other fruits, this nut does not come true to variety from seed, and while the apple, the peach and all other commercial fruits have been developed and improved it remained for the early years of the twentieth century to discover the successful method for propagating this par excellent nut. This discovery opened the way for commercial nut orchards. The finest and largest of the thin-shelled varieties, which are infinitely superior to the small, thick-shelled kinds known to the public, were propagated by enterprising nurserymen, and orchards were planted which in due time yielded a uniformly high grade product and reached profitable bearing in half the time the uncertain seedling tree required. Then by careful selection a strain of abundant and regular bearers were developed, which reduced the problem to a simple commercial proposition.

This much accomplished, the combination of suitable land, carefully selected trees and a competent man, with a sufficient working capital developed the orchard and produced nuts which the public was willing to purchase at fancy figures. More orchards naturally followed rapidly, and thus a new industry was born.

Under reasonable care some of the early-bearing varieties yield a few nuts as early as the third season after the orchard is planted, and become profitable bearers the seventh and eighth years, while succeeding years show a rapid increase in yield, so that about the tenth or twelfth year the returns, at present prices, approximate annually the cost of the orchard.

A pecan orchard comes about as near affording a permanent and profitable investment as can be obtained from the soil, and is ideal as far as safety is concerned. Pecan trees are known to reach the age of six hundred years. Individual trees have

sometimes produced one thousand pounds of nuts in a single season. While the common small seedlings have a market value of ten cents a pound, the improved varieties bring from forty to sixty cents.

The great future of this industry, however, is recognized in the fact that the pecan is a concentrated and highly nutritious food product and that an acre of land devoted to this use will continuously and at small cost for maintenance yield more food units annually than can be obtained from any other crop.

The fact that comparatively few people will make investments where profits are not expected for several years eliminates any possible chance for over-production. Besides, the superior thin-shelled varieties can be produced commercially only in a limited territory, while all the civilized world furnishes a market. Add to this the knowledge that the population of this country is increasing faster than the orchard area of pecans is being enlarged, and you have a business proposition fully equal to all the claims made for the industry. Another significant endorsement is found in the largely increased importations of nuts into this country.

It should be borne in mind that the successful development of a pecan orchard requires experience, skill and good business management, just as these essentials are needed in other lines. In this connection, it is well to remind the public that care should be exercised in making pecan investments, as well as investments in any new field. It is not enough that the development and selling may be in the hands of men of integrity and business ability. They must know the business or be able to command the services of horticultural experience which can produce the maximum of profits at the minimum of necessary expense. Any one can buy and plant successfully a pecan tree—and farmers generally should have orchards—but from an investment view-point the man who can more than double the dividends is the one to direct the operations.

Not long ago it was difficult matter to obtain reliable data about pecans or to secure competent men. Now, the National Nut Growers Association and The Nut-Grower are available for public use. In fact, these agencies have been powerful and far-reaching factors in founding and developing in the south this new business, the importance of which the future alone can measure.

The Nut-Grower

Published monthly by The Nut-Grower Company

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Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



Secretary Bullard of the National Nut Growers Association advises that the dates for the 1917 Convention at Biloxi, Mississippi, is October 10, 11 and 12, the earlier announcement having been for the 10th and 11th only.

The Pecan Conference scheduled for Waycross on the fifth of this month has met with wide and very favorable consideration, and indications are that the attendance will be highly creditable. The program, which appears in this issue, will convince our readers that the subjects listed and the speakers' assignments will be certain to amply reward those who attend.

In the natural course of events, we are advised occasionally of the death of a subscriber. Recently word came that Dr. J. P. Harrison, of Texas, who for years was on our regular mailing list, was dead. However, this does not cancel the subscription, for his widow has it continued in her name. It is the rule that in changes of this kind, as well as removals to new fields, The Nut-Grower continues to reach the family. We only count a subscriber dead when he loses interest in the business and orders his subscription discontinued when we send him a bill for arrearages.

Samples of pecans from Mr. A. L. Hodgdon, grown in St. Mary's county, Maryland, recently received, compare very favorably with specimens of the same varieties grown further south. Stuart was up to regulation size and was well filled. The specimen marked Frotscher resembled the Stuart so closely that we were inclined to think it was

misnamed. Van Deman, Schley and Teche were under size; otherwise characteristic. Mr. Hodgdon's trees are yet young and the bearing character they will show in that latitude will be of much interest. We will look for annual reports from these trees.

The issue of "Pecan Pointers," our Publicity Agency, had been mailed only a few days when marked copies of various publications began arriving, many of them carrying prominently the entire group of pointed paragraphs. Others used such portions as they found most timely or desirable. The generosity and co-operation of our editor friends is doing much for the industry. At the same time we are conscious of the value of the news and educational data contained in these monthly messages. We feel confident that many of the patrons of the publications that use the items will be interested and benefitted by the service.

The announcement in this issue for the Northern Nut Growers Association's Convention will receive much attention from many of the pecan growers in the south, as well as the general membership of the Northern Nut Growers Association. In this connection it is recalled that the advocates for a change of name of the National Association are active members of the northern organization. When the proposed change was advocated at the Jacksonville Convention in 1916 it appeared to the majority that there was no occasion for changing the name, even if the distinctive accomplishments of the organization were in the line of pecan development. The national character of the association was easily recognized in the impetus given to nut culture in all parts of the country, which led to the formation of the Northern Association and various other more local and specialized societies. There was no occasion for acknowledging to the world that this distinguished body had been sailing under false colors, urged as a reason for a change of name. This would indeed have been a strange admission for a body having an established character as well as reputation for fair dealing and wonderful accomplishments, which it is true were largely and necessarily directed to the exploiting of the pecan. The Northern Association is rendering a magnificent public service, and there is no element in the country which recognizes and appreciates their work more than the pecan growers, but they rather have a love for their organization and its name that has for sixteen years been their pilot and guide, and would not consent to any unnecessary change or policy.

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WITH THE EDITOR AND HIS CORRESPONDENTS

RAIN HELPS PECAN TREES

Editor Nut-Grower:

Permit me to say since the ad-the long dry spell, everything looks refreshed and is showing renewed life. My pecan trees look the picture of health, though the nuts are very scarce. The Satsumas are putting out new growth, and the fruit has nearly doubled in size since we had rain; the trees have on a fair crop. Trucking has suffered considerably on account of the drought; for some things the rain came too late, but other things are picking up and showing the benefit of the moisture. Before long we will

have new sweet potatoes, and hundreds of thousands of vines are now planted for late crops.

C. FORKERT.

Ocean Springs, Miss.

HELPS SOLVE PROBLEMS

Editor Nut-Grower:

Enclosed please find New York draft for one dollar as a year's renewal subscription to The Nut-Grower. We have a small orchard of about 900 trees here and find that your paper helps us in solving a few of the many problems we naturally have.

W. C. PIERCE, JR.
Marshall, Tex.

NEW TREE CROPS AND A NEW AGRICULTURE

(Continued from page 82)

is the preservation of the soil, and that soil conservation is 99 per cent the prevention of erosion. Soil robbery by unscientific agriculture can go to its extreme lengths and reduce the soil to depths of non-productivity; but scientific agriculture can, by the addition of humus and some fertilizer, soon restore such soil to high fertility. In these conditions of exhaustion the loss to fertility by soil leaching is small, because of the non-soluble character of the earth particles. Thus experiments at Cornell have shown that in the average foot of top soil from rather unproductive farms in a low state of production, there was plant food sufficient for 6,000 crops of corn. We have all seen a single thunder shower remove from a hillside

corn field the fertility adequate for making of a hundred crops of corn.

American agriculture is peculiarly soil destructive. Three of our greatest money crops—corn, cotton and tobacco—require that the earth shall, throughout the summer, be loose and even furrowed with the cultivator, which prepares the ground for washing away, and by its furrow starts the gully. The second factor in this peculiarly destructive agriculture is the fact of our emphasis of rainfall in summer. Third in the list of factors of destruction is the rainfall unit, the thunder shower, which dumps water hundreds of tons per hour on every hillside acre. A little examination of the facts and careful inclusion of the time element will show that the old-world saying, "After man the desert" is quite as true in the United States as in Europe and Asia, where it has been so fearfully

proven in the seats of ancient empire.

This soil resource destruction from erosion leads to the destruction of other valuable resources. We appear to be upon the eve of an epoch of waterway construction and experiment. The greatest injury to waterways is channel filling by down-washed mud. Pittsburg has been praised highly for the energetic action of her chamber of commerce and citizens in appropriating money for the careful survey of drainage basins above the river, with the idea of obtaining knowledge preparatory to the building of reservoirs to check floods. They have forty-three reservoir sites, and the early construction of nineteen of these reservoirs is recommended.

A part of the reservoir plan, however, is that the land above it shall not be cultivated; otherwise the erosion from the tilled fields will promptly fill up the reservoirs, as the present condition of many eastern mill dams so emphatically attests. The carrying out, therefore, of the Pittsburg reservoir plan necessitates the exodus of hundreds of thousands of farmers and the restricting of many farming communities to forest or a new type of agriculture.

We cannot spare all this land from tillage. But fortunately there are other ways of using it. Land east of the 100th meridian may be divided into three classes: First, which in the absence of better estimate covers one-third of the area, is hopeless for agriculture because of hills and rocks. This is mostly now in poor forests. The second class, also covering one-third—by the same estimate—has been cleared for agriculture, but is so hilly and eroded as to be in a poor state of fertility and production. The third class, the remaining third of the land is suited to the plow and

should be plowed and cultivated much more intensively than it now is.

For the first and second classes of land we need a new type of agriculture, the crop-yielding trees. Our agriculture, which depends so largely now upon those members of the grass family which we call grains, is the result of accident, not the result of science. At the dawn of history man had practically all of these small grains, which have probably resulted from the selection and seed saving of the primitive woman, as the race came up from savagery into agriculture. This primitive woman in selecting plants for her garden and little field, did not pick out the best of nature, or the most productive, or the ultimately most promising; she picked annuals because they gave the quickest return. And man has left alone and practically unimproved for all these thousands of years nearly all the great engines of nature, the crop-yielding trees, such as the walnut, hickory, pecan, acorn yielding oak, chestnut, beech, pinenut, hazel, honey locust, mesquite, screw bean, carob, mulberry, persimmon, paw-paw, etc., because their slow growth has deterred us from any attempts at improving them. We have depended upon and greatly improved the quick growing grains, which spend most of their short life in putting up a framework which promptly perishes; whereas the tree endures like a manufacturing plant. Further than this, most of the grains have a period of crisis, during which they must receive water or the harvest is almost a failure. Thus corn must within a short period receive moisture, or it is too late to produce even husks.

Yet trees are the great engines of nature. The mazzard cherry

Efficient publicity among The Nut-Growers' readers pays those who have attractive trade offerings in the line the publication represents.

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Grafting Wood of Stuart, Frotscher, Tecumseh. MRS. M. L. RANDOLPH, Bayou Goula, La. "Blythewood Pecan Grove." 10-6

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the southeastern United States often yields twenty bushels of fruit. Fifty bushels and upwards are often obtained from the mature apple trees. The walnut yields its bushels, the persimmon breaks with fruit.

Europe shows us an agriculture making considerable use of crop-yielding trees other than the ordinary fruits. Mr. C. F. Cook of the Department of Agriculture, is the authority for the statement that Mediterranean agriculture began on the basis of tree crops, and there are now about twenty-five such crops in the Mediterranean basin. The oak tree furnishes five, cork bark, an ink producing gall which enters into the manufacture of all our ink, the Valonia, or tannin-yielding acorn, which is an important export from the Balkan states; the truffle worth several million dollars to France; and lastly the acorn. In the Balearic Isles, I am informed, certain acorns are more prized than chestnuts and the trees yielding them are grafted like apples, and the porker is turned out to make his living picking up acorns where they fall, and enriching his diet with a special kind of fig grown in the same way for his use. We Americans are too industrious; we insist upon putting a pig in a pen and then waiting upon him. The pistachio, the walnut, the filbert and the chestnut are all important tree crops in parts of the Mediterranean countries and many American travelers have probably seen the chestnut orchards of France and Italy, which I have found by examination are able to make the rough and unplowable mountain-side, bristling with rocks, as valuable as the level black praries of Illinois.

The natural objection may be raised that the utilization of so much hilly land in fruit and nut-

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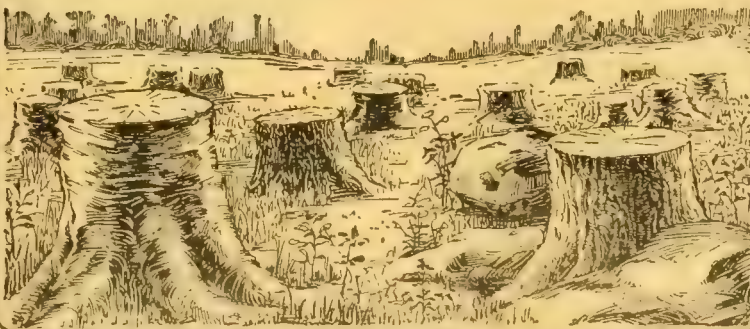


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yielding trees will give such supplies of new food that people will refuse to use them. The above objection is well founded; but swine, sheep and poultry eat what is given them. I have an example of a farmer of Louisiana, who planted a hillside to mulberry trees. The mulberries held the ground in place by their roots and dropped their black harvest to the ground through three months of summer, and the hogs gathered them up and converted them into pork worth \$12 an acre, without any effort on the part of the owner. The mulberry area in the United States is probably close to a million square miles. Over most of the region south of Mason's and Dixon's Line the persimmon is a hated tree weed; yet it stands by the millions in fields and fence rows, fairly bending down with a full crop of fruit every other year, which is much sought after by the opossum and other wild animals, and eaten when possible by the American porker from September, the end of the mulberry season, until March, for the persimmon has a habit of dropping its fruit through the long winter period. The oak, whose acorns probably made the pig what he is, is almost neglected in America; yet for ages the Indians of the Pacific coast have made their bread from acorns of two species of oak, one of which is now gathered by the farmers of California, put into their barns and bought and sold as stock food. The beechnut and the hickory nut are rich and much prized swine food.

Legumes, of which there are many species, can be grown between nut-yielding trees to maintain the fertility of the soil through the nitrogen-gathering nodules upon their roots.

As it often seems desirable to cultivate trees of this character

where possible, the tree crops agriculturist is above all others able to adjust his crop and the one device that permits the tillage of hilly land—terracing. Terraces interfere with machinery which is so increasingly essential in the cultivation and harvesting of the present crops. But terracing interferes least of all with the tree crop agriculture, because the trees can stand in the terrace rows and make a fortunate combination of the heavy yielding tree crops and the soil preservation through terracing.

We have an interesting example of tree crop productivity in Hawaii, where the agaroba was introduced from Peru in the last century. It has now spread until it covers considerable area with forests, and information from the Hawaiian Experiment Station is to the effect that it is now the mainstay of the dairy industry of the islands. The annual crop of four tons of big beans to the acre can be, and is ground into a highly nutritious meal food, selling at \$25 a ton, an agriculture which, for ease of operation and richness of return, puts Illinois to shame, for, in addition to the \$100 worth of animal food, there is a ton of wood per acre every year.

The tree crop agriculture seems to hold the possibility of letting the worst third of our soil (Class 1 as mentioned in the foregoing) become as productive as the best land (Class 3), while (Class 2) can probably be doubled in productivity. This is a goal well worthy of much endeavor on the part of the plant breeder.

I believe that the development of a tree crop agriculture offers one of the greatest possibilities in constructive conservation of natural resources. Individuals cannot be depended upon to do it. The work is too slow. A man might by decades of work create species that would be, if fully

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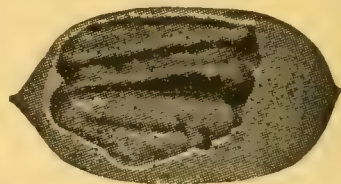
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utilized, worth a hundred million dollars a year to a state like Pennsylvania; yet he would be unable to realize personal gain from the results, provided he had secured them. Institutions must do it. It is like the Geological Survey and the Census Bureau and the

ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

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BLACKSHEAR, GEORGIA

Agricultural Experiment Stations which depend upon appropriations. The appropriations depend upon the realization of the importance of the work. There are interesting examples of similar work already in operation, of which the following might be mentioned: The Agricultural Experiment Station of Arizona has started a twenty-four-year series of experiments in breeding the date palm. In North Dakota, where the blizzards kill nearly all the ordinary fruits, an experimenter has done much work in the breeding of hardy strains of apple, cherry and other trees.—DR. J. RUSSELL SMITH, before the Northern Nut Growers Association.

NORTHERN NUT GROWERS CONVENTION

At its annual convention at Washington last year the association chose Stamford, Connecticut, as the place for the next meeting and the date has been fixed for Wednesday and Thursday, September 5 and 6. Headquarters will be at the Hotel Davenport and it is asked that room reservations be made as early as possible.

Stamford is a busy city of 30,000 inhabitants, situated on Long Island Sound 33 miles from New York City with which it is connected by frequent trains on the New Haven Railroad. Like Greenwich, four miles away, and other adjoining towns, Stamford is the home of many wealthy New York people and the interest in horticulture is as great as in any part of the country. Many native and introduced nut trees of interest are found on these places.

Merribrook, Dr. Morris' country place, where he has been conducting his nut and other horticultural experiments, is near Stamford. The wish to see this place and Dr. Morris' work was

the reason why the members chose Stamford as the meeting place. A morning or afternoon will be spent at Dr. Morris', three sessions held for the reading of papers and the discussions, including one evening session and an illustrated talk, if possible, and visits will be made to several interesting nut trees and to Dr. Deming's place at Redding. Those who come in automobiles and will have room for one or more passengers are asked to let the secretary know.

Addresses have been promised by the following persons: H. H. Collingwood, the "Hope Farm Man," editor of the Rural New Yorker; Dr. J. H. Kellogg, of the Battle Creek Sanitarium; Dr. Robert T. Morris; Prof. W. N. Hutt, President of the American Pomological Society; C. A. Reed, Nut Culturist of the U. S. Department of Agriculture; W. C. Reed, President of the Association; T. P. Littlepage, of Washington; J. F. Jones, the nut specialist; Ralph T. Olcott, editor of the American Nut Journal; F. A. Bartlett, editor of Tree Talk.

Several other teachers or officials in horticulture or allied sciences have been asked to make addresses or have promised to be present.

A luncheon or dinner for the members and visitors is proposed.

Come to this meeting if you think it worth while to develop an industry of food supply, the richest that Nature gives, that grows with the least trouble to man; come if you like fine shade trees that give food as well; come if you are a scientific breeder of plants; come if you are looking for an occupation that will give you a new interest in life; come if you are only just fond of trees. You will meet men who are full of stimulating ideas and have facts to tell that are new.

PECAN CONFERENCE

Farmers, business men and ladies are invited to attend and hear the papers and discussions on various practical and interesting features of the pecan industry. The wide-spread public interest in the pecan, its availability as a farm and food crop, and the commercial advantages its culture offers to this section of the limited pecan belt, makes this occasion one of peculiar interest, especially as the several speakers are men of recognized ability who have had a wide range of practical experience.

The selection of topics is well suited to the interests of the classes invited to attend. Each speaker will bring a message of instruction and inspiration, showing opportunities that are present and how to utilize them. In brief, the conference is a free public service which will work out with benefits to individuals and the general public in proportion to the extent that the people of Ware and adjoining counties attend.

Assuring the public that any one interested in the pecan will have a profitable and interesting day by attending both sessions, and urging others who have the public interest at heart to hear these speakers, we are,

Respectfully,

J. F. WILSON,
Editor The Nut-Grower.

J. S. ELKINS,
Secretary Chamber of Commerce.

Dan Lott, Waycross.
J. R. Strickland, Blackshear.
C. W. Waughtel, Homeland.
L. A. Wilson, Waycross.
T. J. Darling, Waycross.
D. W. P. Williams, Blackshear.
R. G. Dickenson, Homerville.
A. C. Snedeker, Blackshear.
R. B. Sessoms, Waycross.

PROGRAM

- 10:00 a. m.—Convene for Personal Touch Opportunities.
10:15 a. m.—(a) Call to Order.
(b)—Singing "America."
(c)—Invocation, Rev. W. P. Price.
(d)—The Waycross Latch String," Harry D. Reed.
10:30 a. m. (a) "The Pecan as a Farm Adjunct," J. B. Wight, Cairo, Ga.
(b)—Discussion.
11:00 a. m. (a) "The Care and Culture of Pecan Trees," H. P. Stuckey, Experiment, Ga.
(b)—Questions and Answers.
11:30 a. m.—(a) "Marketing Pecans," Dan Lott, Waycross, Ga.
(b)—Discussion.
12:00 m.—"Top-Working Pecan Trees," J. William Firor, Athens, Ga.

AFTERNOON

Personal Touch Exercises will be resumed as soon as two or more return from lunch.

All the papers of the afternoon session are of particular interest to ladies and economic students.

- 2:30 p. m.—(a) "Pecans as Food," Chas. N. Wilson, Waycross, Ga.
(b)—Discussion.
(c)—Questions and Answers.
3:00 p. m.—"Quality and Quantity in Pecans," Dr. W. P. Williams, Blackshear, Ga.
(b)—Discussion.
(c)—Questions and Answers.
3:30 p. m.—(a) "Satsuma Oranges with Pecans," Prof. R. Lloyd Scott, Mobile, Ala.
(b)—Discussion.
(c)—Reports.
(d)—Discussion.

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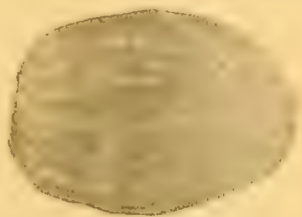
Satsuma Oranges

—AND—
Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

**Turkey Creek
Nursery Company,**
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SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

4:10 p. m.—“Pecans in Public Welfare,” Herbert C. White, Albany, Ga.

(b)—Discussion.

(c)—Questions and Answers.

4:50 p. m.—(a) Transaction of Business.

(b)—Resolutions.

(c)—Adjournment.

It is desired that each person attending this conference sign an attendance card, giving name and address. This will provide for their being kept in touch with subsequent meetings if such should seem desirable.

PUBLICITY FOR THE PECAN

The Nut-Grower asks for co-operation in conducting a regular and systematic Publicity Service, which will place each month in the hands of several hundred influential Agricultural and Trade Journals concise and accurate data with current news items of public interest regarding the pecan and commercial nut orchards.

The method pursued is simply to print or manifold a monthly sheet and mail to selected editors in all parts of the country. This sheet is so arranged that the busy editors can select and clip for their own use, without cost or other obligation, such of the items as they may choose as supplying instruction or news for their readers.

These same sheets can be sent in bulk at nominal cost to others who will find them of use as envelope enclosures.

This service, if sufficiently extended, is acknowledged to be the best and most economical way to counteract the operations of incompetent and dishonest parties who are now in the field, while at the same time is a most effective way to bring to the public the

merits, advantages, and achievements of those following approved and skillful methods.

The direct benefits to the public thus obtained warrant the small cost of the service. The increased business which will come to nurserymen, real estate dealers, and orchard companies, as well as allied lines of trade, cannot be obtained in ordinary ways, except by systematic advertising, which entails large expense. In fact, the publicity supplements in a substantial way the usual advertising.

Particulars and subscription blanks for copies in bulk will be furnished on application.

AMERICAN POMOLOGICAL SOCIETY CONVENTION

The regular bi-ennial meeting of this organization will be held in Boston, Massachusetts, October 31 to November 4 1917.

The occasion in full will be a meeting of the Massachusetts Horticultural Society, the New England Fruit Show, and the American Pomological Society. Very full and extended programs covering all phases of fruit growing will be rendered and an exceptional exhibition of fruits, fruit products, and allied material will be staged.

The American Pomological Society will feature the Wilder Medal, its distinct and special honor for new fruits, discoveries in pomological science, and for specially meritorious exhibits.

Unique exhibits and demonstrations with some of our newer fruit introductions, such as the Avocado, and fruit juices, as the Loganberry juice will be in evidence.

On the whole, the event promises to be one of unusual interest to American pomology. Boston's well known attitude toward both amateur and professional horticulture and pomology assures a

Jefferson County Pecan and Live Stock Company

Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.

L. Majewski, Gen. Mgr.

FOR SALE

A number of fine 8 to 12 foot Budded Pecan Trees of the leading varieties; a number of 3 to 5 foot Budded Pecan Trees; 3,000 June Buds at big bargain.

Write For Prices

D. & O. LOTT COMPANY
Waycross, Ga.

Budded and Grafted PECAN TREES

HEALTHY, WELL-GROWN NURSERY STOCK. STANDARD VARIETIES FOR SALE. REASONABLE PRICES. WRITE FOR PRICE LIST

Poland Plantation Nurseries
Monticello, Fla.

WOODSON Automatic Self-Feeding Pecan Sheller

In use by more than 80 per cent of the Commercial Pecan Shellers in the United States.

Awarded highest prize at St. Louis and San Francisco Worlds' Fairs. Built for either belt or motor drive; only 1-6 h. p. required.

Protected by U. S. Patents.

I also manufacture the most up-to-date
**COMMERCIAL PECAN GRADING
MACHINERY**

To insure prompt delivery this fall, it would be wise to place your order now.

If interested, write for catalogue and copies of letters from satisfied customers.

ROB'T E. WOODSON

INVENTOR AND MANUFACTURER

5773 VERNON AVENUE ST. LOUIS, Mo.

delightful and instructive week to all those attending.

Those who contemplate offering new fruits for the Wilder Medal should advise the Secretary, E. R. Lake, 2033 Park Road, Washington, D. C., in order that registration and entry cards can be properly made before the meeting date.

The A. P. S. program is being prepared by the President, W. N. Hutt, Raleigh, N. C. Suggestions along this line should be addressed to him.

CONVENTION DATES

Some of the meetings scheduled this fall that will be of interest to nut growers are:

The Northern Nut Growers Association, Stamford, Conn., September 6.

Pecan Growers Conference, Waycross, Ga., September 5.

National Nut Growers Association, Biloxi, Miss., October 10-11-12.

American Pomological Society, Boston, Mass., October 31 to November 5.

Our Mid-Summer Inventory

shows the **LARGEST** and **BEST STOCK** of **PECANS** and **SATSUMA ORANGES** ever produced by the

CITRONELLE NURSERY and ORCHARD CO.

This fact assures the customers of this company high grade stock free from disease and from which they will get results.

As the demand for both Satsuma Oranges and Paper Shell Pecans will exceed the supply you should place your orders early. Write for prices.

Citronelle Nursery & Orchard Co.

(Incorporated)

CITRONELLE, ALABAMA

Pecans--A Money Crop

The largest pecan acreage in the United States is planted along our lines in Georgia and Florida.

As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

Along with general farming and stock raising the pecan is proving very profitable.

Write us as to land, prices, and location for such farms.

Atlantic Coast Line

"The Standard Railroad of
The South"

WILBUR McCOY, A. & I. Agt.
Jacksonville, Fla.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

Volume XVI

October, 1917

Number 7



EVERY man is called to some position in which he will be both Servant and Master, in which he will be under Authority, in which he will have some under his authority. What your lives shall be, what good or mischief you will do your country, will depend mainly upon the question now you understand this position, what you suppose to be the nature of this Authority. Just so far as you forget that the position involves a relation, just so far as you confound the Authority with Dominion, your manners will become brutalized; just so far you will help to brutalize all with whom, in any capacity, you are associated.—FREDERICK D. MAURICE.

10c per Copy

\$1.00 per Year

Pecan Trees

Budded Paper Shells
Best Varieties
Expert Propagation
Healthy and Hardy Stock

WRITE FOR PRICES

T. H. PARKER, Moultrie, Ga.

15,000 Pounds Pecans

We expect to have for sale 15,000 pounds of the highest grade, standard size and weight pecans, as follows:

Schley.....	8,000 lbs.
Stuart.....	3,000 lbs.
Van Deman.....	2,500 lbs.
Frotscher.....	2,000 lbs.

WE WILL SELL IN
BULK THE WHOLE
CROP, OR OTHER-
WISE

Deliveries October 15th and
January 15th.

KEYSTONE
Pecan Orchard Co.

Groves: Baconton, Ga.
Offices: Florence, S. C.
JAS. D. EVANS, President

PECANS AS FOOD

It is now beginning to be definitely recognized that nuts are sooner or later to play a very important part in the diet of the American people. The impression which has long prevailed that they are fit only for dessert or as an ingredient of confectionery is being dissipated as people begin to recognize their availability as a substitute for meats and other more important parts of the daily menu.

In European and Asiatic countries nuts of various sorts have long occupied a prominent place in the staple food stuffs. In Italy a very palatable flour is made from the chestnut, which grows so abundantly in that country. The almond and the filbert in Spain and France form a principal ingredient of many nutritious dishes. In this country we have been slow to recognize the food

(Continued on page 105)

The W. B. Dukes
Pecan Farm
Moultrie, Georgia

Growers and
Shippers of

**FANCY PAPER
SHELL PECANS**

One million grafts and buds of Schley
Stuart, Delmas and Moneymaker.
Write for favorable prices.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

VOL. XVI


WAYCROSS, GA., OCTOBER, 1917

NO. 7

THE SATSUMA ORANGE—ITS RELATION TO THE PECAN AND SOUTH GEORGIA

By R. LLOYD SCOTT

Read at the Pecan Conference at Waycross, Georgia, September 5, 1917

N these days when our own country, as well as the larger empires and republics of Europe and Asia, are engaged in the greatest war the world has ever known, a struggle which we hope will decide for all time to come the questions which involve the right of all peoples to enjoy sovereignty, freedom and independence, no one phase of the situation has been brought to our attention more than that involving efficiency.

Efficiency has been the watchword, and many have been the instances where it has overbalanced that other item in the struggle—"preparedness." Preparedness in the sense we are inclined to interpret it without efficiency is at best a makeshift. It is not a question of the largest army or navy, but a question of equipment and supplies, and above all, training. Efficiency in each individual soldier means an efficient army.

The same principles apply to the main factors which are backing up the army in the field—manufacturing, transportation and food production. We are vitally interested in the problem of food production, not alone as concerns the growing of crops for the duration of the war, but the placing upon a firm foundation such industries as will lend a hand to the problem of feeding devastated Europe in the lean years which are sure to follow the close of the struggle.

Efficiency as applied to food production, as well as manufacturing and transportation, means the greatest results with least proportionate amount of expense—the utilizing of every bit of energy which goes into the making of the finished product. The utilizing of space, time, labor and materials all come in for a portion of the credit and each fit in and combine to such an extent that these items must be considered as a whole in

order to obtain the best results.

One of the questions which confront the pecan orchardist is, "How can I use to best advantage the surplus space between pecan trees during the time between planting and bearing, thereby realizing the greatest returns from investment in labor and materials."

Several side lines present themselves to the pecan orchardist, including truck gardening, live stock, poultry, general farming and interplanting with fruit trees which will fill in with crops until the pecan grove is old enough to occupy the entire space.

Each of the foregoing lines have their advocates, also advantages and disadvantages, according to the individual taste of the orchardist. Probably no fruit tree lends itself more adaptable to interplanting with pecans than the Satsuma orange. Of late years this fruit has been rapidly gaining in favor and is destined to put the Gulf Coast country on the map as a fruit growing section which should rival Florida and California. The reason is to be found in the fruit itself, and possibly a word of description would not be out of the way.

The Satsuma is an orange of the kid glove or mandarin type, varying in size from two to three and one-half inches, orange-yellow in color, juicy and sweet. The rind is thin and separates easily from the fruit, the segments of which can be easily divided without losing any of the juice. The fruit ripens the latter part of September and first of October and goes on the market at least sixty days before the standard varieties of Florida and California are ripening. The crop is entirely harvested and ready in ample time for the holiday trade.

This orange was introduced into the United

States from Japan during the seventies, and when tried out on sour orange and lemon stocks was pronounced a failure. Later when budded on citrus trifoliata it was found to produce a fruit of excellent quality and to bear early and exceedingly well. The tree is an evergreen, thornless, spreading in habit, and should be classed as a shrub rather than a tree, as it does not grow tall, and the largest part of the crop can be picked without the use of ladders.

The Satsuma owes much to the less conspicuous member of the citrus family, citrus trifoliata, or C. T. stock, to use the vernacular of the nurseryman. Citrus trifoliata is deciduous in its nature and very hardy, withstanding weather much colder than zero. When used as a stock or root system for the Satsuma, it imparts to its top the tendency to become dormant during the winter months, thereby rendering the entire tree less susceptible to damage by frosts. It has hardly been determined just how much cold the Satsuma, when in good condition, will stand, but it is the opinion of most authorities on the subject that temperatures may fall to fifteen or sixteen degrees without damage to trees or succeeding crop. The trees have repeatedly gone through weather much colder than this with only slight damage to tips of branches. Probably the lowest temperature on record and quoted in connection with the Satsuma was in February, 1899, when the thermometer registered zero at Mobile. Satsuma trees in the orchard now owned by Dr. H. E. Scott, across the Bay from Mobile, in Baldwin county, were frozen back to within a short distance of the ground, while other oranges and vegetation were entirely killed. We have learned in the past few years that a great deal depends on the condition of the trees during the winter months, and that this condition can be governed in the majority of cases by the care given the orchard. In this respect they fit in admirably with the pecan. Time and methods are adaptable to both the orange and pecan.

The Satsuma comes into bearing very early, trees often bearing the first year after planting, but a commercial crop should not be expected until the third season. The amount of returns to be expected from any specified number of trees is rather problematical, as it is with any other crop grown, though the chances of a failure are fewer than with many other crops considered more staple. The following points may be taken into consideration in reaching the foregoing conclusion:

First, hardiness and proven bearing qualities of the trees; second, the crop is marketed at a time when there is little competition and good demand; third, the non-perishable qualities of the fruit itself.

Too much cannot be said for the Satsuma in this respect, for, unlike the peach and fruit of like nature, it does not have to be harvested at just the right time to keep the crop from spoiling on the trees. The fruit will hang on the trees for sixty days after ripening if it is deemed necessary to delay the harvesting to such an extent; and here again it holds honors with the pecan, as it renders the orchardist practically free from worries of labor shortage at the critical time of harvesting.

An estimate quoted by orchardists of the Satsuma districts gives the number of oranges to be expected from a two-year-old tree at twenty-five, the crop increasing 100 per cent the third, fourth and fifth years. I believe these figures to be conservative for a well-cared-for orchard. Supposing the oranges bring one cent each, another very conservative figure, the returns per tree for the first four crops would be 25 cents, 50 cents, \$1.00 and \$2.00 respectively. At the rate of one hundred trees to the acre, the returns for the first four crops would be \$25.00, \$50.00, \$100.00 and \$200.00 respectively. Other statements from growers and other estimates could be quoted at length, but it is not my intention to burden you with a long list of statistics, as figures are sometimes misleading. But one test that each and every one can put to the question as to whether it pays to interplant pecans with Satsuma oranges is to ask the owner of a bearing grove his opinion of the matter, or better yet, endeavor to purchase such a grove. The crop may be expected to increase from year to year till such time as the trees would have to be removed to make room for the pecans. Like the pecan, they are long-lived, and their period of usefulness when planted in connection with it is determined by the needs of the permanent trees.

Just a word in regard to what the Satsuma will do for South Georgia. The orange growing business as related to the Gulf Coast country is comparatively in its infancy, and yet the Satsuma has been grown long enough to say that it is past the experimental stage. There are thousands of acres of cut over pine land in this southern part of the state which are adaptable to orange planting, and every acre cleared and planted in orchards of this delicious fruit represents an asset which will increase from year to year with amazing rapidity. It is hardly necessary to call your attention to the fact that from an investment standpoint, a few trees added to an acre of land will form a combination that will hardly be duplicated in any other line. Your orchard forms the principal on which you figure the interest, and this principal is increasing from year to year with the growth of the orchard. At the same time it is returning what would be

considered a very high rate of interest in the shape of crops, which is also increasing with the principal.

It took the people of Mobile and Baldwin counties some time to wake up to the opportunity which was knocking at their doors, and within the past ten years there has been laid the foundation for one of Alabama's most valued assets. It is estimated that three million orange trees have been put out in this time, owing to the publicity work throughout the north, in these two counties alone. This means approximately thirty thousand acres as the trees are now planted, and as those orchards will average at least five years in age, a valuation of \$500.00 per acre would not be excessive. This makes the industry worth fifteen million dollars to that immediate section. What has been done in Alabama can be done in Georgia, and all that is

needed is the awakening of growers to the possibilities. The growers of Alabama are fully awake to the value of their industry and they lose no opportunity to exploit the attractions of the business. Orchardists, merchants, bankers, and railroads all co-operate in advertising, and for the past three seasons there has been set aside one day during the harvesting season on which a celebration is held in the city of Mobile, justly commemorating the worth of the Satsuma. Through efforts of those interested, "Satsuma Day" has become a regular attraction to the orange industry and the vicinity of Mobile.

May we not look forward to the time, and let us make it soon, when South Georgia is producing a golden harvest of Satsuma oranges and doing her bit towards filling the ever increasing demand for this delicious fruit?

MARKETING PECANS

By DAN LOTT

Read at Pecan Conference at Waycross, Georgia, September 5, 1917

WE have learned to recognize the pecan as a luxury and are beginning to appreciate its good qualities as a food product, and a profitable crop to produce. With the advent of the fine standard varieties, and the increasing production from year to year, the successful marketing of the crop becomes more of a problem. It matters not how large the crop or how urgent the demand, the full value, from the producers' view point, cannot be obtained generally without systematic and organized marketing facilities. However, new uses for the pecan kernels in the confectionery trade and the availability of the nut as a staple and desirable food are working changes which thus far have had the effect of absorbing the production rather than being properly marketed.

There are indications that this process of absorption by dealers and speculators is not a safe, certain or profitable method for the ordinary producer.

It is the purpose of this paper to outline some of the things which it is well for the pecan producer as well as those producing other orchard and farm crops to have organized and properly handled. The general law of supply and demand in regulating prices and handling crops seems in these troublous times to have lost its virtue. Speculation is rife. The gap between producer and consumer is constantly increasing. The price paid the grower as

compared with that exacted from the consumer is such that co-operative organizations for marketing the pecans will soon be a pressing need, if it does not already exist. We expect the production of pecans to regularly increase in volume in this section from year to year. When the farmer and suburbanite, rather than the commercial orchardist, produce nut supplies for a general market, as is the custom in European countries, they will want and need a home market for this crop, as well as for their cotton, live stock and vegetables. As long as a local demand will take at satisfactory prices the production of any single or group of producers, the problem is simple and no city middle man needs to be in the transaction. Parcel post shipments direct to consumers, obtained through circular letters or advertising, is working well with a class of producers who are willing to take the pains and incur the expense of building up trade of their own. Only a few of the small producers, however, can be expected to handle the retailing of their crops to advantage. Thus the organized marketing agencies are needed.

While we may not have thus far felt the urgent need for such facilities because the general demand for the product and the speculative buyer have regularly taken the offerings, still the time is coming when co-operative buying and selling will

(Continued on page 103)

The Nut-Grower

Published monthly by The Nut-Grower Company

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



During the session of the Pecan Conference, which was held on the same date that the Northern Nut Growers convened at Stamford, Connecticut, a telegram was sent extending kindly greetings, and encouraging the proposed joint meeting of the two associations at Albany, Georgia, in 1918.

At railroad centers in the pecan belt there is now need of business facilities for assembling, grading and marketing pecans. The marketing includes the installation of cracking machines for cracking grade and seedling nuts, as the prepared kernels properly packed for retail trade yield better returns than the retailing of the small nuts.

Growers along the Gulf Coast had their crops of pecans ruined by the storm of July 16, 1916. Repeated storms and the extreme late cold in February last has cut off the 1917 crop so severely that the courage of the growers is put to a severe test. The Satsuma orange, however, has withstood the visitations very well and a fair crop is now maturing.

The Waycross Pecan Conference seems to have been the beginning of a chain of progressive movements rather than a complete work. The formal papers, in addition to appearing in The Nut-Grower as rapidly as space will permit, are finding their way into other influential journals and daily papers and are thus reaching the public through various agencies. The resolutions adopted in several instances have a punch which promises to lead directly to larger fields, with open doors to the public, and with especial interest and benefits to farmers.

Several years ago The Nut-Grower advocated the intercropping of pecan trees with Satsuma oranges. The article went into some details and made so favorable an impression that there were requests for reprints which came in so promptly that it was reissued. The first edition of a thousand copies of the reprint did not last long and larger editions followed. These reprints were widely and carefully used and doubtless were a factor in the development of the Satsuma industry in several localities which have since become famous. At that time it was supposed that the Satsuma was a risky venture on account of occasional severe winters. Since then the citrus canker panic has swept over the country, and the white fly has also added its part in discouraging the planting. Thousands of trees have also failed from neglect and lack of cultivation.

Now, it seems to those most familiar with this wonderful product, that the calamities incident to its commercial development may be regarded as blessings in disguise. The white fly is not serious except where the various host plants give it needed facilities for increasing. Spraying and treatment even then holds it in check. The citrus canker is being vigorously combatted by state and national agencies, while the Satsuma is more resistant to injury from this disease than other varieties. The extreme cold of last winter destroyed only such trees as had not received the attention and protection which they need under extreme conditions. All of these things tend to give assurance and confidence to those who understand the requirements of the tree and actually bestow the cultivation and care necessary for success.

The paper read by Mr. R. Loyd Scott on the Satsuma at the Pecan Conference, and which is found in this issue, is a remarkable, clear and forceful presentation of the subject, showing what he believes to be a golden opportunity for the Coastal Plains section, equal, if not superior, to the advantages already being utilized along the Gulf Coast and lower California. Mr. Scott makes it clear, however, that even in a favorable section of country, that particular attention must be given to the selection of soil best suited to the requirements of the tree. His first work in coming into the Waycross district is in making a careful and extended survey of soil conditions and drainage.

The orchard operations which Mr. Scott contemplates developing will be based largely upon results obtained from this survey, which will take cognizance of horticultural conditions and opportunities in general, although making a particular study of pecan and Satsuma orange conditions.

CARE AFTER PLANTING

The care of trees and shrubs, says a well known nurseryman, is especially important for the first few years after planting until they shall have become thoroughly established in their new location. It is really a very simple matter, if thought be given to a few points as to what is essential to provide for the most successful results in planting.

In the first place, a tree or shrub in its younger stages naturally makes its roots near the surface of the ground, and for a time after it is planted every effort should be made to continue the growth of these surface roots until it shall have put forth its deeper, permanent feeding roots, which will search the lower strata of soil for food and moisture. This can be most successfully done by applying a thick mulch of manure 3 to 4 inches deep to the ground, after planting, which will keep the surface soil loose and moist and at an even temperature, not alternately hot in the baking sun of mid-day in summer and quickly frozen in early winter. This mulch also permits the free passage of air and falling moisture into the soil.

MARKETING PECANS

(Continued from page 101)

be necessary. Co-operation means simply "fair play in working together."

At all pecan centers, of which Waycross will be for various reasons a prominent point, certain facilities, conveniences with competent management should be organized which will be equally

available for any and all producers of this splendid nut. This central organization is necessarily a business proposition and extends service to the public in this particular line for the surrounding territory, and constitutes the local market for the producers, just as similar facilities are needed for general crops—cotton or live stock. This central organization is able to do the necessary things, have the proper equipment and business connections that the individual grower could not afford or handle.

The proper curing of the nuts, the systematic grading, the preparing for market in standard containers, as well as the selling are all provided for, so that the ability and integrity of the management determines the success of the operations, when the volume of business to be handled warrants establishment and operation of the enterprise.

At present our production may not warrant the formation of such an institution. However, we need data as to the annual yield of pecans in this territory, as well as information as to the probable increase in the near future. If this conference should see fit to appoint a committee to assemble such data as might be useful in this respect, it would be an initial movement, which would sooner or later develop into organized efforts.

In the mean time, what is to be done with the present supply of pecans? Obviously there are three things which the grower needs to do. First is to let the fact be known locally or generally that there are pecans for sale. Second, they must be offered in a business-like way as to varieties and

Our Mid-Summer Inventory

shows the **LARGEST and BEST STOCK** of **PECANS** and **SATSUMA ORANGES** ever produced by the **CITRONELLE NURSERY and ORCHARD CO.**

This fact assures the customers of this company high grade stock free from disease and from which they will get results.

As the demand for both Satsuma Oranges and Paper Shell Pecans will exceed the supply you should place your orders early. Write for prices.

Citronelle Nursery & Orchard Co.

(Incorporated)

CITRONELLE, ALABAMA

Pecans—A Money Crop

The largest pecan acreage in the United States is planted along our lines in Georgia and Florida.

As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

Along with general farming and stock raising the pecan is proving very profitable.

Write us as to land, prices, and location for such farms.

Atlantic Coast Line

"The Standard Railroad of
The South"

WILBUR McCOY, A. & I. Agt.
Jacksonville, Fla.

particularly as to grades. Third, the grower should know approximately at least the current market value for such grades and varieties as he has to offer. This necessary information is readily obtained through the official organ of the National Nut Growers Association, "The Nut-Grower," at the small cost on the annual subscription plus such advertising of offerings as may be desired.

Prices are ordinarily fixed by the buyers who are bears in the general markets and pay only what they must in order to obtain the supplies desired. The grading is just as important with pecans as for the advantageous selling of cotton. Lots that are not graded command only the prices of the inferior grade.

The proper grading of pecans is a problem not yet fully worked out by the several nut grower organizations. The buyers, the state and national market bureaus possibly should establish official standards, rather than leave it to these associations, which are scientific and horticultural bodies and have not yet reached the point of offering a convenient and generally acceptable system. Two or three years ago the Pecan Growers League, a small body of producers who are successfully selling to local and mail order customers, adopted a simple and practicable method of grading based upon the size, or rather the number of nuts required to make a pound of the several grades. It provided for four grades or classes. First, the "Fancy," or Jumbo, as ordinarily called. This grade includes all nuts large enough or heavy enough to run fifty or less separate nuts to the pound. Number 1 had its maximum and minimum number limitations, the figures I do not now recall. Number 2 includes still smaller nuts up to a definite number, and number 3 in-

cluded all those smaller than Number 2 grade required. Each of these grades was subdivided into classes so as to allow quality of the standard varieties to have proper recognition. Class "A," regardless of size, included Schley and a few others of the finest quality. Class "B" lists varieties of secondary quality, while Class "C" provides for inferior varieties. Nuts without character or quality claim, regardless of size, belong in Class "D." Thus by this system the numerals indicate size and the letters quality. A package marked "Schley 1-A" would indicate the contents so fully that the purchaser would know the contents and value.

We understand that the marketing of pecans will, as time

passes, receive increasing attention. Our horticulturists and pecan boosters, as well as the nurserymen, have been giving attention to the planting and selling of orchards, features of the industry which do not appeal to the farmers or small growers.

The pecan is here, and here to stay; is certain to become a great commercial factor in our food supply, so that wise and timely provision for easy and successful marketing should now be made, as the farmer, who is the logical producer of future crops, cannot utilize to advantage the present methods and facilities in use by commercial orchard companies.

Thus we see the opportunity for co-operative work among pecan producers in promising the full commercial price for this par-

WOODSON Automatic Self-Feeding Pecan Sheller

In use by more than 80 per cent of the Commercial Pecan Shellers in the United States.

Awarded highest prize at St. Louis and San Francisco Worlds' Fairs. Built for either belt or motor drive; only 1-6 h. p. required.

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To insure prompt delivery this fall, it would be wise to place your order now.

If interested, write for catalogue and copies of letters from satisfied customers.

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INVENTOR AND MANUFACTURER

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Highest Prices Paid for PecansNO QUANTITY TOO LARGE
OR TOO SMALLR. E. FUNSTEN DRIED FRUIT & NUT CO.
St. Louis, Mo.**ISSUES LIST OF FARMS FOR
SALE IN SOUTH GEORGIA**

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

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**Reliable
Bearer****Williams Pecan**

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INTRODUCER

BLACKSHEAR, GEORGIA

ticular product. The comparatively few people who are yet engaged in growing the pecan and the peculiar intelligence of those who are already in the ranks make co-operation in this particular a comparatively easy proposition.

While in the past fancy prices have been paid for large nuts, regardless of quality, the wise consumer is learning that there is more food, greater satisfaction and less cost in using smaller nuts when assured as to quality. This system may not suit the **commercial grower or the dealers**, but it certainly has its place in the direct connection between producer and consumer, so that the middle man, the agent or the commercial orchards need not for the present be taken into consideration until such time as they can offer a better plan.

PECANS AS FOOD

(Continued from page 98)

value of our native nuts. The European peasant uses nuts as a substitute for the more expensive food stuffs. Here we fail to use nuts as a food largely because they are more expensive than the staples in ordinary use for foods. Aside from the fact that nuts at present are somewhat more expensive articles of diet than those we now use, we have failed to take them into serious consideration as competitors of our present food stuffs, partly because they are not as yet produced in sufficient quantities, but more because of our ignorance of their possibilities along this line. However, both of these conditions are being slowly but surely overcome, and there is little doubt in the minds of those who have studied the situation that the day is surely coming when nuts will form a very important food for the American people.

At this time, when the scarcity

of grains, or rather the unprecedented demand for them, looms up like a specter of starvation on the horizon of many of the nations now engaged in the world war, to say nothing of those neutrals whose situation is already becoming alarming, a large supply of nuts would appear at this time as the greatest of blessings. Especially to Germany, where fats and vegetable oils have been almost unknown for the last year or so, would a bumper crop of nuts, such as the pecan, be a veritable godsend. When the people of the world recognize the importance of the nut crops, the possibility of an overproduction of such crops will be as remote a possibility as an overproduction of wheat, corn or rye.

Of the various nuts which this country produces, those of us who live in the South and have become familiar with the pecan naturally have come to regard it as the choicest of all nuts. And this belief is based on more than merely our personal belief and our personal tastes. A pound of pecans contains as much protein as half a pound of meat, as much fat as three-fourths of a pound of butter and as much starch, or carbohydrates as a quarter pound of bread. So it is readily seen that pecan meats are very highly concentrated food, containing practically all the elements necessary for the nutrition of mankind.

For a long time we have been prone to regard the pecan's part in the diet as strictly limited to the dessert. Cakes and confectionery supplied the only medium through which the pecan was allowed to get on the bill of fare. But in recent years breads, salads and many other of the more staple dishes now seen on our tables consist wholly or in part of this most versatile nut.

Domestic science has been

quick to recognize its possibilities, and there is being created even now a demand for pecan meats which is hard to fill on account of the extremely limited production, which not only renders it hard to obtain them, but also is responsible for the present high cost of the nuts. As the demand increases, as it is bound to do, and the production is enlarged, prices will naturally become more favorable for the consumer and this will tend toward increasing still further the demand, and the grower, while he will not always receive the prices he gets at present, will through the increased volume of his business, receive larger and larger profits from his trees.

The time is at hand when nuts will assume the place on our tables to which they are justly entitled by reason of their great superiority over some of our present articles of diet. And when that time comes the grower of pecans is going to reap a rich harvest.—CHAS. N. WILSON. Read at Pecan Conference at Waycross, Ga., Sept. 5, 1917.

PIN-HOLE BORERS, OR AMBROSIA BEETLES ATTACKING PECAN TREES

The following letter from Mr. Grover Bowden, of Glenwood, Alabama, and the paper thoroughly covering the subject by Mr. John B. Gill, of the U. S. Bureau of Entomology, Monticello, Florida, will be of interest to pecan growers and orchardists generally:

Glenwood, Ala.,
Aug. 1, 1917.

The Nut-Grower,
Waycross, Ga.
Dear Sir:

A little insect which is described in a recent article in one of our state papers and called the ambrosia beetle by the state en-

tomologist, is attacking my trees and playing havoc with them. I have already lost fully one-third of my five and six year old trees. Our state entomologist says he knows of no remedy for this beetle. If you can help me out in any way in combatting this pest I wish you would do so. He attacks the trees and bores into the wood, making a very small hole about the size of a pin. The tree soon turns yellow and dies.

This is the worst enemy of the pecan that I have dealt with. I shall appreciate any help from any source.

Yours truly,
GROVER BOWDEN.

During the past year there has been an unusually large loss of pecan trees due to winter injury or so-called "winter-killing." For the most part the winter injury has been confined to trees ranging from two to six years of age, but occasionally older trees have suffered. The extent of injury was not restricted, however, to pecans, as various kinds of plants, including fruit and forest trees and ornamental shrubs, were badly damaged by the cold. In two localities in Georgia it was reported that practically all trees in one-year-old peach orchards were killed, and in southern Alabama serious damage to peaches occurred. Many citrus trees, such as the Satsuma orange, grape fruit, kumquat, etc., growing in the southern part of the pecan belt, were also severely injured.

During the past spring the writer has received numerous inquiries as to the cause of the unusual loss of pecan trees. Growers in examining the dead and dying trees invariably found the trunks being attacked by small black beetles, which they concluded were accountable for the damage. Examinations were made in various large pecan or-

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A popular tool for budding Pecans, Hickories, Walnuts, Chestnuts, Persimmons and all other trees.

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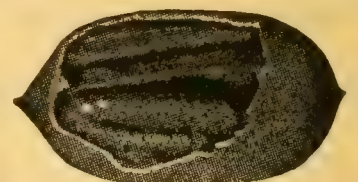
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Thomasville, :: Georgia



The Pecan Business

In a concise booklet—FREE. Every point mentioned, from planting the nuts to gathering the nuts. Written from practical results, over 20 years experience. Trees and nuts for sale.
B. W. STONE :: Thomasville, Ga.

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

STANDARD VARIETIES OF PECAN NUTS

Several hundred pounds yet for sale. See samples. Prices right.
Chas. Crossland, Bennetsville, S. C.

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THE NUT SPECIALIST
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Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
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C. FORKERT, Proprietor

Ocean Springs :: Mississippi

As an advertising medium, The Nut-Grower pays those who have attractive offerings in the line the publication represents.

chards in which considerable loss had been reported. The characteristic symptoms of winter injury were quite evident. The trees were very dark, and in some instances, nearly black. In cutting through the bark into the sapwood it was found that a discoloration of the cellular tissue had taken place and a marked fermentation of the sap had begun. It was noticed that trees suffering from winter injury were usually able to put forth some foliage, but within a short time the leaves wilted and turned brown. On some trees the foliage, however, remained in apparently good condition for several months, after which it turned yellow and wilted.

The writer took especial pains to ascertain if insects were in any way accountable for this decline of pecan trees. Extensive examinations have shown that trees affected by winter injury are usually attacked by small, blackish beetles, which make holes in the trunk about the size of a pin-head and extend their boring operations deep into the heartwood. Many healthy trees were carefully examined, but in no case were these pin-hole borers found attacking them. It was evident that these insects were attracted to the winter-injured trees by the souring or fermentation of the sap. According to the writer's observations the real cause for the dying of pecan trees was due solely to winter injury and not to insect attacks, as has been the opinion of some.

Specimens of these tiny pin-hole borers were collected from various localities and identified. Three distinct species, namely, *Xyleborus saxeseni*, *X. pecanis* and *X. affinis* were found, but none of them are known to be primary enemies of trees. These beetles and their young do not really subsist on wood, but feed

upon a certain fungous growth called ambrosia, which they propagate upon the walls of their galleries. Because of this peculiar feeding habit these insects are commonly termed ambrosia beetles. The ambrosia beetles found occurring on pecans attack only trees in a dying state, in which the natural flow of sap has ceased and fermentation has begun, and for this reason they should not be considered enemies of healthy pecan trees.

CONTROL MEASURES

All dead and dying pecan trees, whether infested by ambrosia beetles or not, should be removed from the orchard and burned promptly, as such trees make ideal breeding places for certain destructive wood-boring insects, such as the flat-headed borer.

If pecan trees are kept in a thrifty, growing condition ambrosia beetles will not attack them. But, on the other hand, if the trees suffer from winter injury or some other devitalizing condition they will be quite susceptible to attacks from these insects. The orchardist should adopt such cultural measures that will permit trees to mature well by frost time. If winter injury has been quite prevalent in parts of young orchards, as is sometimes the case, it might pay to mound each tree to a height of ten or twelve inches just before cold weather.—JOHN B. GILL, U. S. Bureau of Entomology, Monticello, Fla.

MATURE TREES AND WINTER KILLING

The great number of trees—peaches, pecans, apples, etc.—killed last winter has brought forth the question as to how this can best be prevented. Peach trees live through the winters in the New England states, therefore it is not a matter of absolute

cold. In the South it is a question of keeping the trees dormant. Trees which have had a long summer to grow through and go into the winter matured will stand cold better than those which have grown during but a part of the summer and go into the winter in a sappy condition.

In examining many pecan, apple and peach trees this spring, it was observed that the cells beneath the bark just above the soil were killed, while the cells higher up were still alive. This is the part of the tree that matures last, at least the part of the tree above the soil that matures last. To lessen the injury from cold, it is necessary to keep the trees growing vigorously throughout the spring and early summer, then help them to mature the wood during the last of August and September by having some water-using crop growing in the orchard. This gives it a long growing season and also a chance to mature its wood. In addition to these precautions, the trees, if young, can be banked with soil. Whitewashing just before frost will help to keep down the temperature as white reflects more light than the natural color of the tree. Shading with a board to the southeast is also helpful—J. WILLIAM FIROR.

THE PECAN CONFERENCE

The Pecan Conference at Waycross, Georgia, September 5, 1917, was well attended and the program as advertised was fully carried out, with the exception of one paper, the author of which having been called to service in a training camp. Farmers, business men and horticulturists were in evidence and evinced a keen interest in the papers and discussions.

The direct results of the conference is seen in the action taken

For Lease

PECAN GROVE five miles south of Milton, Fla., and fifteen miles southeast of Pensacola, one-half mile on east to East Bay, and one mile on west to Escambia Bay; 250 acres, all under good fence, soil fertile and tillable; 125 acres have been planted in soft-shell pecans five years old; good residence and barn, dry and healthy location.

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Hinder rations and you hinder victory. Other ships and more food must take the place of those destroyed.

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POSITION WANTED—By a reliable man of middle age, as general manager or worker in a pecan farm. Have experience in nursery and orchard work; have studied the pecan business all my life; am an expert budder; can furnish best reference as to ability and character. If you need an industrious manager or hustling worker for that pecan farm, write me at once, stating salary. Address "Reliable," R. R. 2, Box 68, Whigham, Ga.

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In the HEART of the Texas Pecan Belt

We have all the leading Texas and Southern varieties of pecans. Very best of trees.

We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

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Catalog free. We pay express. 420 acres.

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Only the best tested varieties are grown. Why not get them?

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Pecan Trees, Pecan Nuts, English Walnut Trees

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**WHOLESALE
GROWERS OF**

**GRAFTED AND
BUDDED
PECAN TREES**

**SIMPSON
Nursery Co.**

Monticello, Fla.

by those present in forming a Fruit and Nut Association, and the adoption of a plan for holding a Fruit and Nut Day celebration at Waycross at some date to be selected for completing the proposed organization.

Several resolutions were adopted which voices the sentiment of the conference. Among them are the following:

"Resolved—That we heartily commend the growing of pecans to the attention of Southeastern farmers, with assurance that with reasonable care and attention, a few trees or an orchard will afford pleasure and profit."

"Resolved—That it is the sense of this meeting that an organization of Fruit and Nut Growers of the Coastal Plains section of the Southeast would be highly useful in an economic and commercial way to both public and private enterprises, which find in the favorable conditions of soil, climate and rainfall various opportunities for progressive and profitable enterprises."

"Resolved that a committee of three be appointed to select a pecan slogan for use in popularizing the pecan in this territory."

"We recommend the establishment of a 'Fruit and Nut Day' for Southeastern Georgia, to be observed annually at an opportune date for the purpose of making known to the public generally the many good qualities of this nut, and for exhibiting products and appliances pertaining to the industry."

NATIONAL NUT GROWERS CONVENTION

The National Nut Growers Association will hold its annual convention at Biloxi, Mississippi, October 10, 11 and 12, 1917.

A synopsis of the program sent out by the Association is as follows:

"Peaches as Fillers in Pecan

Groves."

"Can a Pecan Grove on Loose Sandy Soil be Made Profitable?"

"Profits from a Pecan Grove as Compared to Regular Farm Crops."

"The Possibilities of Pecan Culture as Compared with Standard Fruits."

"Will the United States Continue to be the Leading Country Growing Pecans?"

"The Importance of Nuts as Food."

"Has any Standard Fruit Industry as Few Disease and Insect Enemies as the Pecan?"

"Northern Border for Southern Varieties and Southern Border for Northern Varieties of Pecan."

"Best Method of Pruning Nut Trees."

"Nut Oil."

"Winter Killing of Nut Trees."

"Successful Control of the Serious Nut and Nut Tree Insects."

"Varieties of Pecans."

"Texas as a Pecan Possibility."

"Probable Volume of the Pecan Crop and How Marketed Ten Years Hence."

"Can the Persian Walnut Be Grown Successfully in the South Atlantic and Gulf States?"

"The California Almond Growers Exchange and Its Work."

"Is Rosette Under Better Control and How?"

"Best Management of Pecan Groves in Bermuda, Alfalfa and Nut Grass."

"Cover Crops for Pecan Groves."

"Is the Farm Tractor a Valuable Adjunct to the Pecan Orchard?"

"The Farm Management of a Pecan Orchard."

"The Planting and Care of Young Pecan Trees."

The foregoing subjects, with possibly others to be added, will be discussed by the leading men in the nut industry—men who have gained their knowledge

Jefferson County Pecan and Live Stock Company

Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

WRITE FOR PRICES

You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

Monticello, Fla.

L. Majewski, Gen. Mgr.

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As GOOD as can be grown

And as CHEAP
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be grown...

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Trees



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Are Grown From

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Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties. Our system of growing, digging and handling pecan trees insures success. Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

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Macclenny, Florida

Pecan Trees

Satsuma Oranges

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Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

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The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

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The general discussion following each subject participated in by those present will bring out sidelines that always prove to be both interesting and profitable.

Biloxi, Mississippi, is a pretty little city with hotel accommodations for 500 people. It is only seven miles from Ocean Springs, in which region so many of our leading varieties have originated. An opportunity therefore will be afforded of seeing some of the old groves and seeing and talking with some of the veterans in this industry.

Parties desiring information otherwise than local may write to the President, Mr. B. W. Stone, Thomasville, Georgia. All local information may be obtained from Mr. H. H. Roof, Secretary Biloxi Commercial Club.

Membership fee in the Association is \$2.00, thereafter the annual dues are \$2.00 per year. Payment of either membership fee or association dues entitles one to a copy of the proceedings of the Annual Convention when issued.

Make all remittances direct to the Secretary.

W. P. BULLARD,
Secretary.

BOOKS AND CATALOGUES

Two volumes of reports for Agriculture in Massachusetts for the year 1916, of two hundred and fifty pages each are of much general interest and valuable to the agricultural interests of that state. Part 1 is devoted to the Report of the Secretary and Part 2 constitutes the Year Book of the State Board.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson: a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

VOLUME XVI

NOVEMBER 1917

NUMBER 5



O COME back home after every stage of life's journey with a wider horizon—more in sympathy with men and nature, knowing ever more of the right and eternal laws which govern them, and of the loving and righteous Will which is above all, and around all and beneath all—this must be the end and aim of all of us, or we shall be wandering about blindfold, and spending time and labor and journey money on that which profiteth nothing.

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BOOKS AND CATALOGS

The 1917-18 Catalog and Price List of budded pecan trees issued by the Magnolia Nursery and Orchard Farm, Cairo, Ga., W. O. Jones, proprietor, lists and describes eight well-known varieties and devotes a page to information showing the value of pecans as food.

The Dupont Company, of Wilmington, Del., has issued a very attractive book entitled "The Sport Alluring." It is artistically printed as well as illustrated and will give many a very different idea of what one usually thinks the sport of trapshooting is. It contains over thirty illustrations that will interest any sporting man. Lovers of outdoors should write for one.

The Citronelle Nursery and Orchard Company, of Citronelle, Ala., specializes in pecans and Satsuma oranges. Their illustrated folder gives interesting information.

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Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

Volume XVI

WAYCROSS: GA., NOVEMBER 1917

NO. 8

THE IMPORTANCE OF NUTS AS A FOOD

By DR. J. H. KELLOGG

Read at the Biloxi Meeting of the National Nut Growers Association

It has long been predicted by scientists that the world would be compelled to derive its sustenance directly from the soil. The present high price of meat was anticipated more than twenty years ago by the officials of the United States Department of Agriculture. The increase of our human population and the decrease of our animal population have both progressed more rapidly than was anticipated, and the artificial conditions imposed by the world war have still further increased the price of meat and made meatless days a necessity. Thus the question, is meat essential to complete human nutrition? has become an imminent one.

As an abstract scientific proposition this question was answered by physiologists years ago by laboratory experiments. According to Magnus Levy, one of the world's most eminent authorities, "It is indeed true that the vegetable albuminous substances as they occur in nature are equal in nutritive value to an equivalent protein of animal origin." More recent studies, however, by McColum and others have shown that the selection of the vegetable foodstuffs which shall compose the bill of fare is not a matter of indifference. There is a difference in proteins. Every vegetable produces proteins which are peculiar to itself. Animal proteins also differ but apparently less widely than do vegetable proteins, and many vegetable proteins differ very widely in character from those which composed the highly vitalized parts of the human body. Fortunately, vegetable proteins do not all differ in the same way. Some differ in one direction, others differ in an opposite direction. And so by the proper selection of vegetable foodstuffs it is possible to make a combination which will supply the human body with exactly the sort of material which it requires for building purposes and for repairs.

Taking the protein of the human body for a

standard, it is found that proteins that are found in cereals, green and root vegetables, legumes and most other vegetable products are incomplete. They are lacking in certain elements which are absolutely essential to the building of healthy human blood and tissues.

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Careful chemical analysis, however, has shown in recent years that the protein of nuts, or at least some of them, are complete proteins. Nuts, in fact, furnish proteins of such a fine quality that they are capable of complementing other foodstuffs. Their proteins supply the elements necessary to render complete the proteins of cereals and other vegetable foods. This discovery is one of the highest importance, since it opens a door of escape for the race from threatened extinction by starvation at some future period, perhaps not so very remote.

From an economic standpoint, the rearing of animals for food is a monstrous extravagance. According to Professor Henry, dean of the Agricultural Department of the University of Wisconsin, and author of an authoritative work on foods and feeding, one hundred pounds of food fed to a steer produces less than three pounds of food in the form of flesh. In other words, we must feed the steer thirty-three pounds of corn in order to get back one pound of food in the form of steak. Such an extravagant waste can be tolerated only so long as it is possible to produce a large excess of foodstuffs. It is stated, as a matter of fact, that at the present time scarcely more than ten per cent of the corn raised in the United States is directly consumed by human beings. A large part of it is wasted in feeding to animals. This economic loss has been long known to practical men, but it has been regarded as unavoidable, since meat has been supposed to be absolutely essential as an article of food; but the experience of Germany since the beginning of the present war, as well as of Japan,

China and India for many centuries, has demonstrated beyond chance for cavil the possibility of eliminating meat from the national bill of fare. As a matter of fact, milk and eggs supply essentially the sort of protein that is supplied by meat, and milk furnishes a protein which is superior to that of meat; but milk is rapidly rising in price and will doubtless go still higher for the reason that for every pound of food in the form of milk it is necessary to feed a cow more than five times the amount of food obtained, and for food in the form of eggs or chicken we must throw away more than twenty pounds of food of fully equal value. So it is quite possible that the time may come when the people of this country, like those of some other countries and like our primitive ancestors who lived wholly upon the products of the forests, and our modern relatives, the orang-utan, the chimpanzee, and the gorilla, must depend entirely upon the products of the vegetable kingdom for their sustenance.

It is important to know that if such a time comes it would be possible to arrange the bill-of-fare that the race may lose nothing of vigor or energy because of the restriction in diet. As a matter of fact, there is good reason to believe that if man had never acquired his present omnivorous habits and had adhered to his original vegetable regimen, he might have escaped a very large proportion of the multitudinous ills which have greatly impaired his efficiency and are even threatening the extinction of the race.

In view of these facts it is most interesting to know that in nuts, the most neglected of all well known, foods we find assurance of ample and complete food supply for all future time, even though necessity should compel the total abandonment of all our present forms of animal industry.

One of the great advantages of the nut is that with very few exceptions, it may be eaten direct from the hand of nature without culinary preparation of any sort. Indeed, the common custom in offering nuts as dessert is an acknowledgement that this refined chemistry of nature's laboratory permits of no improvement by the clumsy methods of the kitchen.

The nut is a fruit with a shell. In the process of ripening, the actinic rays of the sun digest the crude starch found in the green fruits and convert it into delicious fats and sugars ready for prompt utilization. The protein of the nut resembles the caseine of milk and requires no cooking to render it readily digestible. The only preparation the nut needs is thorough mastication to

insure the prompt admixture and action of the digestive fluids.

Mastication is largely a mechanical process and may be very largely substituted by crushing the nut into a paste or grinding it into a fine meal.

More than fifty years ago I became convinced that flesh foods are not an essential part of the dietary of man. Cuvier, the great French naturalist, had stated that man's natural diet was the same as that of the chimpanzee and the orang-utan, and consisted of fruits, nuts, soft grains and tender shoots.

I was so thoroughly persuaded of the scientific accuracy of Cuvier's statement that I adopted the natural diet and have followed it since. I have also very earnestly advocated the biologic diet and have, I think, persuaded some thousands of people to adopt it.

More than forty years ago I became superintendent of the Battle Creek Sanitarium, then a small water cure, and have since had under my supervision more than 100,000 sick people, besides other persons, employees, students, friends of patients and guests, numbering probably half as many more. All these persons have been introduced to a fleshless bill-of-fare, often with very evident and very great benefit. At the present moment the Sanitarium family numbers about twenty-five hundred persons. In August we feed daily about three thousand persons and never a particle of flesh food of any sort comes upon our table.

Of course I have taken no small interest in nuts as a part of nature's scheme of human feeding, and have given them a conspicuous place in our bill-of-fare. During all this period I have carried on extensive inquiries, having for their purpose the development of the nutritive properties of all sorts of foodstuffs and have made many thousands of experiments with nuts in our food laboratories. In the course of my experiments I hit upon the simple process of making peanut butter, which has since developed into a great industry. I also perfected a process for making a vegetable substitute for milk—malted nuts. By request of the United States Department of Agriculture, I undertook experiments to find a vegetable substitute for meat, which resulted in the production of protose, a nut preparation, which to a considerable degree resembles meat in appearance, taste and odor, and besides has a slight fiber like potted meat. Some hundreds of tons of these nut foods have been made and used and they have proved to be complete nutritive substitutes for meat.

The increasing incapacity of American mothers to provide lacteal nourishment for their infants has for years been the subject of much discussion among physicians and has come to be regarded as a just occasion for alarm as an evidence of race degeneracy and a potent cause of infant mortality. Statistics show that the birth rate is rapidly falling in the United States as well as in all other civilized countries. At the present rate of decline no babies will be born in the year 2000.

The American woman is for some reason losing the capacity for motherhood. In other words, the maternal fount is drying up, and, with the loss of capacity for feeding her offspring, the American woman is losing her fecundity. The ability to bear and to feed offspring is a physiologic unit. With failure of one function there is a corresponding decline in the other.

There are born in this country every year 2,500,000 babies. Of these, 300,000 die before they are one year old. The mortality of bottle-fed infants is ten to twenty times as great as that of those who are breast fed. In other words, the failure of mothers to nurse their infants is responsible for the death of scores of thousands of infants annually. Every year we lose babies enough to people a large city because they are not supplied with their natural food, breast milk, for which cow's milk is by no means a complete substitute.

A matter of such serious moment has naturally received no small amount of attention. We have a national society devoted to the "Prevention of Infant Mortality." Numerous experts have devoted much time to the study of this question. Many theories and conjectures have been presented, but few facts. Dr. Chalmers Watson, of Edinburg, some years ago made extensive feeding experiments upon rats which led him to the conclusion that the increased consumption of meat was the potent cause of the failure in the genitive power of the British race. He found that a meat diet caused in rats within two or three generations marked degeneration of the sexual glands, shriveling of the breasts and sterility. This eminent physiologist noted that in the British Islands the decline of the birth rate had been simultaneous with the marked increase in the consumption of meat within the last fifty years.

Recently additional light has been thrown upon this subject which is of special interest to those who are concerned with dietetics and especially those who are interested in nut culture.

At the Detroit, Mich., Woman's Hospital and Infants' Home there has recently been conducted by Dr. Hoobler an extensive series of experiments for the purpose of determining the influence of diet upon the milk production of a nursing mother. It

has long been known that a simple increase of food or of fat has no other effect than to make the mother fat without increasing the flow of milk. Dr. Hoobler's experiments had for their purpose to determine the influence of individual foods and specially arranged dietaries upon the production of milk. Studies were made of the effects of meat, eggs, cow's milk, a strictly vegetable dietary (fruits, grains and vegetables and nuts.

1. The amount of milk produced.
2. The food value of the milk.
3. The effect upon the mother as regards loss or gain of flesh.

It was found that a diet consisting largely of nuts (50 per cent) was far superior to any other dietary and in every particular. The amount of milk was larger than the average (14.8 per cent), the food value was greater (30 per cent), and the mother did better. It was noted that the mothers "took the diet readily, and, in fact, enjoyed it." (Jour. Am. Med. Assn., Aug. 12, 1917.)

The experimenter explicitly states in his report before the American Medical Association (June, 1917), that "nut protein seems in every way as suitable for elaborating milk protein as does animal protein." This is an exceedingly important observation, for it demonstrates two very interesting and basic facts.

1. That animal protein may be wholly dispensed with; that is, that a diet from which meat, milk and eggs is wholly excluded is capable of affording adequate nourishment even for a nursing mother.
2. That nuts are necessary to give completeness to a diet from which milk, meat and eggs is excluded.

The special method of research adopted by Dr. Hoobler provides a most delicate biologic test for the nutriment value of a food. The test shows the nut to be superior to meat, milk or eggs, or all of these foods together, in producing the highest degree of nutritive efficiency. It has heretofore been claimed that the body can make body protein more easily out of the protein of meat, milk or eggs, that is, animal protein of some sort, than from vegetable protein. It now appears that this is not true. Nut protein is the best of all sources upon which the body may draw for its supplies of tissue-building material.

When one contemplates the fact that the meat supply of the world is rapidly diminishing, and realize that there is no probability that the diminished supply of animal foodstuffs will ever be materially increased but rather will steadily diminish, the importance of this new knowledge will be appreciated. The human body must have for its perfect nutrition

The Nut-Grower

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be found only in animal foods and nuts, then, we must look for the future sustenance of the race. At least nuts must be used as a supplement to other vegetable foods and in increasing quantity as the meat supply decreases.

It is certainly high time that governments, state and national, were giving attention to this highly important question. Millions of nut trees should be planted on public lands, along railroads and highways, in mountain regions and other places which have been denuded of their primitive forest growths. Nut pines, of which, according to Dr. Morris, there are thirty different species adapted to all conditions of climate and soil; black walnuts and hickories in the north, and in the south pecans and other subtropical nut trees, should be planted on an extensive scale. In the near future vast forests of these precious food-producing trees will be needed to supply the nutriment required by teeming millions of hungry people in this country and Europe.

Every farmer should prepare to plant out a few acres of nut orchard next spring. Three are millions of second-growth hickories of the pig-nut and other worthless varieties growing in pastures and by the roadside which by grafting with shagbark cuttings may become prolific producers of one of the most valuable of nuts.

Nut growing is certainly destined to become one of the most important of our agricultural industries. Half a century hence the nut crop will far exceed in volume and in value our present animal industry.

If the United States government will secure the planting of ten nut trees for each of its 100,000,000 inhabitants, all the pastures may be converted into corn or wheat fields and all the packing houses into factories and the flocks of sheep and herds of swine

and cattle may disappear, and yet no one will suffer from protein starvation.

Twenty million acres of land in walnut trees would suffice to furnish one-fourth of a pound of protein and half a pound of fat, the equivalent of a pound of beefsteak and more than half a pound of butter for every man, woman and child in the republic. To what better use could we put our roadsides and a small slice of our public lands of which hundreds of millions of acres are lying waste and idle. And lands not fit for other purposes might be used for some species of nut trees.

Nuts should be eaten at every meal and made a substantial part of the bill of fare. So long as the nut is regarded as a dainty, suitable only for desert, the demand will be limited. But as its merits come to be appreciated it will be in great demand place in the national bill of fare.

Important, however, that the public should be educated to look upon this choicest of all nation's products as a staple food and should give to it its proper place in the national bill of fare.

The nut growers of the future will be the aristocrats of the agricultural world. Plant a nut orchard and eat the fruit of it and get in line for membership in the aristocracy of health and the hundred-year club.

The Waycross Chamber of Commerce took an active and substantial part in planning and carrying out the public service connected with the recent pecan conference here. It is giving similar support to the newly-organized association which is one of the first tangible fruits of the conference.

Mr. Dan Lott, of Waycross, comes to the front with a cluster of nuts from a six-year-old Schley tree. Aside from being fine specimens from a young tree, the significant feature of the cluster lies in the undisputed fact that it contains sixteen fully developed nuts. Quite a nice little cluster.

During the past few months we have given considerable attention to winter-killing of pecan trees, as the damage from this source was severe last winter in the southeast. It seems from the article furnished by the United States Bureau of Entomology which appeared in our October issue, that the damage usually charged to the pin-hole borer, is attributable to the same source. There is ample reason to urge the cessation of cultivation of the pecan not later than September 1, so that the trees will be thoroughly dormant by the time the freezing weather arrives.

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PECAN ORCHARD YIELDS

Editor Nut-Grower:

I have read with pleasure the Nut-Grower for August, 1917. I have been reading The Nut-Grower from the very first up till now. I like this August number so well I actually read the paper twice.

This is the first time since I have been taking the paper that I have found a real true account concerning the bearing of pecan trees. While this account may not be just exactly correct, it approaches so nearly the truth--- as I have found it---I must call it a true account. What I have reference to is the article written by Mr. J. M. Patterson, on the first page of the August issue.

I don't know Mr. Patterson personally. I wish I did. I would just like to shake hands with him. Mr. Patterson has the thing down correctly when it comes to telling the general public as to how pecan trees behave themselves when planted out in orchard form.

I have been in the pecan business of growing budded and grafted pecan trees since the fall of 1902. I have trees ranging in age from 15 years back down to 3 years. The greater part of my trees run in age 10 yrs, 11 yrs and 12 yrs. Now, would not this make interesting reading to the prospective planters to tell them that I gathered from my 200 trees in 1916, 14,400 lbs, all averaging 72 lbs. to the tree? This, of course is not true. In fact, it is far from true. My best bearing tree, a Delmas, bore 72 pounds of good salable nuts in 1916. None of the rest did as well; the others running something like 50 lbs., 30 lbs., 20, 10 and some even as low as 4 1-2 or 5 lbs to the tree. Those of us who are planting trees, and not selling nursery stock, may be able to explain to prospective buyers why all trees do not bear alike. One mistake I made and

I guess others have done the same—I planted out too many different kinds. Also I find that no two trees of the same variety will grow just exactly the same, nor will they bear just exactly the same number of pounds per tree. Another thing and a very important one a beginner should know so that he will not be discouraged, is that pecan trees sometimes have what we term an off year. And now while I am on this point I shall say this is the off year with my trees, especially the Delmas. The same Delmas tree that had 72 lbs. of fine nuts last year, has this year only about 3 lbs., the ones that had 50 lbs last year, this year have not a single nut on the tree in the spring. The Stuart variety is doing well with me this year; Schley about one half a crop; Bolton, Clark and Jacocks, three-fourths crop.

Now I am not giving out this little bit of scattering information for those who have tried the pecan tree as I have, but it may help the prospective planter and keep him from soaring too high. I have sat down in the past and with my lead pencil calculated the number of pounds my trees would produce when they had reached the 12 year mark, and also the price that I would receive per pound at this age, but now that my trees have reached this age, I find that I soared too high and also that this cannot be worked with a lead pencil. Before I close this article I wish to state that while my trees haven't come in a mile of the nursery man's figures. I am still proud of them and I don't want to sell my little grove for any man's money yet.

Wishing The Nut-Grower and the pecan industry all success, I am

A. B. SAMPLE.

Greenwood, S. C.

THE NUT GROWERS CONVENTION

By A. S. PERRY.

The sixteenth annual session of the National Nut Growers Association convened in Biloxi Miss., October 10th to 12th, with about one hundred in attendance.

The Riveira Hotel was headquarters, and all meetings were held in the Riveira pavilion which was at the end of a long pier which extended far out into beautiful Biloxi Bay, and which made an ideal convention hall, except when a noisy motor boat would drown the speaker's voice, and the one occasion when a beautiful Mississippi maiden clad in an "Annette Kellerman" suit which displayed to a decided advantage the human form divine, disported herself in the water and drew the attention of certain Florida members who should have been paying close attention to Mr. Gill's dissertation on bugs.

In addition to the old standbys who always attend these meetings, there were quite a number from the west, eager to increase their fund of horticultural knowledge and become acquainted with their eastern brethren.

The program was replete with thought-provoking papers and the discussions which followed showed the manifest interest of all present. While every paper was exceptionally fine the one by Dr. Gossard, of Ohio, and the one by Dr. Kellogg, of Battle Creek, Mich., towered above their fellows. Dr. Gossard's comparison of pecan diseases with the other standard fruits, showed strongly in favor of the pecan. Dr. Kellogg's discussion of the food problem opened new avenues of thought and it was the sense of the convention to have this paper published in as many of the leading magazines as possible.

Taken as a whole the convention was a huge success, everybody being very optimistic, despite the short nut crop.

On the last afternoon, the citizens of Biloxi tendered the visitors an auto ride through the pecan and orange groves of the vicinity. With Theo. Bechtel as guide, the famous grove of Senator Money was first visited.

Here they were photographed by Mr. C. A. Reed. The ride continued to Mr. Bechtel's home, where refreshments were served and the "Argentine ants" viewed. Continuing, the visitors were shown the original Success and Pabst trees, two grand old patriarchs alone and neglected in their old age, but whose children are in a thousand orchards, yearly bringing pleasure and profit to many owners.

The convention was honored by the presence of Mrs. W. R. Stuart, the widow of Dr. W. R. Stuart, who has rightly been called "the father of the pecan industry."

The recent storm stripped the Gulf coast orchards, and in some instances blew down a few trees. On this account, there were only a very few exhibits.

At the business session, a vigorous campaign to increase the membership was inaugurated by J. M. Patterson, of Albany, Ga., which resulted in about seventy paid-in-advance members.

All the old officers were re-elected except W. P. Bullard, secretary, whose business interests caused him to retire. A. S. Perry, of Cuthbert, Ga., was made secretary.

In Mr. Bullard's absence, Mr. J. B. Widen, of Cairns, Ga., acted as secretary pro tem.

The convention voted to hold the 1918 session in Albany, Ga., and leave to make it a joint meeting with the Northern Nut Growers Association.

ANNUAL REPORT OF THE SECRETARY

Since the last convention at Jacksonville the proceedings of that session have been published in an acceptable volume and mailed to all members in good standing. A comparatively few volumes have been sold.

The question of membership and finances of the association are important ones. In the past it has been the custom to get a guarantee of \$100.00 cash from the successful place bidding for the convention, but there has been a strong sentiment against

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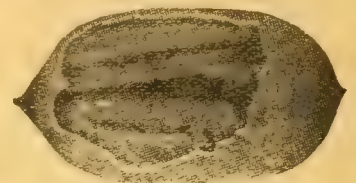
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such an action and the Executive Committee at the Jacksonville meeting decided it would be wise not to exact this bonus in the future; but, of course, any offerings that come our way will not be refused. It was not thought too much, however, to ask the convention city to furnish free hall and lights and to furnish the secretary free of cost and within due time after the convention a transcript of the proceedings of the convention. Biloxi has agreed to do all this.

The Executive Committee has also decided to eliminate the Badge Book from future conventions. It requires very much labor and the net returns are not commensurate with this additional labor and expense. Furthermore the advertising value of such a book is practically nil. Advertisers clubs in cities have placed a ban on such kind of advertising as being of uncertain value at best and a reversal of the past Badge Books will show that it was supported largely by the faithful few in the association who probably realized that they were getting little or nothing for the money they paid. It would also seem to be beneath the dignity of a national association of this character to become a purveyor of goods, wares and merchandise the value of which to the advertiser is nil, or at best very uncertain.

The Executive Committee at Jacksonville also decided to ask, but not to require, the life membership privilege of non-payment of dues, which is one of the privileges of life members. This action was reconsidered and rescinded at the subsequent meeting of the Executive Committee. These life memberships were sold a good many years ago when this association was in financial straits; but such memberships have now run a sufficient time so that the saving in annual dues to these life

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members has amounted to more than the original payment for the life membership. It was thought, therefore, that if the privilege was voluntarily given up now it would work no hardship, while the loss of revenue from the fifty-eight life members is likely to work a serious hardship in future.

It is doubtless a mistake in any such association to sell life memberships under any pretext whatever. It is like taking a drink of intoxicants to drown present trouble, the after affects of which are worse than the original ailment. I know of other associations of similar character that ultimately ran on financial shoals because of the selling of life memberships. The preferable way when funds are needed is for the members, or those who will do so, to guarantee any deficiency in times of need and this, in fact, was once done at an annual meeting since these life memberships were sold, and I apprehend that if the proceedings are to be published this year there will doubtless have to be such guarantee at this convention. I shall not make any charge for my services for this year, 1917, and the stenographic expense has been small.

I would suggest to the next secretary, my successor, that he begin early in the new year an earnest campaign with the old members for their active and personal solicitation of new members. There are thousands of people in the country interested in nut culture, to whom the proceedings of this national convention would be of more value than the \$2.00 per year and many whom would become members personally and urgently solicited. There is scarcely a member in this organization but could turn in from one to a dozen memberships each year. I suggest that this present convention go on record as advocating a booster

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Drawer 176

Waycross, Ga.

membership campaign, with the 500 mark as the goal to be reached and maintained. With such a membership there would be ample funds with which to pay the secretary a reasonable compensation in addition to his stenographic requirements, which are considerable. I would also recommend that the price of the current year's volume of the proceedings be placed at \$1.00 to all members in good standing and \$2.00 for those who are not members. It has happened that we have lost some \$200 payments of dues because the proceedings could be bought for 50 cents, thus effecting a saving to the individual of \$1.50, and I recommend that the preceding year's proceedings be \$1.00 each; this is low enough and is in accord with Prof. Hutt's ideas.

In giving up my secretaryship, which lack of time precludes my considering further, I desire to thank all members for their cordial support. If the new secretary so desires, I will attend to the publishing and mailing out of the proceedings when issued, as was done by Mr. Wight when he retired from the office of secretary, much to my relief as his successor. I make this offer because of my familiarity with the work, which might be somewhat burdensome on a new secretary in assuming the duties of the office. However, if the new secretary desires to handle the matter himself, it will be most acceptable to me.

Mr. Wight, who has so kindly offered to act as secretary pro tem of this convention, will give you the financial statement brought down to date, which owing to my absence I naturally am not in a position to do.

WM. P. BULLARD, secretary.

WHAT OUR SUBSCRIBERS SAY ABOUT US

"I appreciate The Nut-Grower

very much and never fail to read it through carefully immediately upon receipt of a copy."---Thos. A. Banning, Chicago.

"Enclosed find check for \$2.00 for which please renew my own subscription for one year and send The Nut-Grower to Mr. J. R. Savant, Whiteville, La. for one year. You see I have been doing some missionary work."---J. T. McKinnon, Siloam Springs, Ark.

THE FUTURE OF THE SATSUMA ORANGE AND PAPER SHELL PECAN

By R. L. SCOTT

A paper read before the meeting of the Southern Nurserymen's Association, Atlanta, Ga., Aug 29-30, 1917.

I little thought that when I accepted Mr. Chase's invitation to prepare a paper for this gathering, providing that he would furnish the topic, that he had any grudge against me, but upon receiving information from him that I should talk on the future of two of the greatest orchard trees adapted to our Southern country, I realized at once that he was after my goat. To put me in a class of prophets, seer of visions and dreamer of dreams, proves that my accusation is correct. At the present time the term "slacker" is such a disgrace I could not lie down, therefore, I am here to do my bit.

The paper shell pecan is a term which is applied to the standard varieties which are being propagated and put on the market as being superior to what is commonly known as seedlings and Texas nuts, which grow wild in that country. Among the many standard and approved varieties of nuts there are many that are not as thin shell as the term paper shell indicates. But this does not deter from the high quality and popularity of the same.

We believe that the pecan industry is only in its infancy, therefore its greatness lies in the future. In discussing the pecan question and looking into the future, this is the most important question to answer.

All things are good or bad by comparison; prices are fixed by the supply and demand with something better or something

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PRICES REASONABLE. FINE PEACH TREES 8 CENTS. KEIFFER PEARS 10 CENTS. GET CATALOGUE.

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We grow a full line of nursery stock and specialize in Peach, Plum, Apple, Pecan and Berries.

Our LEONA PEACH will supplant Elberta. HAUPT BERRY, a hybrid, for the South is unequalled.

Catalog free. We pay express. 420 acres.

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Pecans—A Money Crop

The largest pecan acreage in the United States is planted along our lines in Georgia and Florida.

As an evidence that the pecan is a profitable crop, we see our farmers continue to plant out young orchards every year.

Along with general farming and stock raising the pecan is proving very profitable.

Write us as to land, prices, and location for such farms.

Atlantic Coast Line

"The Standard Railroad of The South"

WILBUR McCOY, A. & I. Agt.
Jacksonville, Fla.

not so good as the basis to regulate the price. The greatest consumption of nuts in the country with which you are all familiar is the English or Persian walnut. This nut is being grown very extensively in California but the bulk of what is used is imported

as will be shown by figures given later.

I wish to state, and I do not fear that the statement will be disputed, that the paper shell pecan is as far ahead of the English or Persian walnut as day is ahead of night, and I will state further that the pecan can be produced in the coast country as cheap as the walnut can in California, and there is being planted today in California, 100 walnut trees to every pecan tree planted in the coast country. And just think, the price of walnuts is around 12¢ per pound. If California can make money at these prices, the Southland should grow rich. The consumption of nut products can only be shown by quoting from government reports. The production of the English walnut in California for the year 1915 was 28,000,000 pounds. For the year 1916 it was 24,300,000 pounds. The imports of the English walnut 267,699 pounds in the shell and nut for the year 1914 was 28,928,029 pounds of kernels. Please note the change in one year. The amount of shelled nuts nearly doubled and that in the face of the fact that the duty is higher on the shelled nuts than those in the shell. Please note also that the production of 24 to 28 million pounds of nuts in California had no effect on the importations. In fact, the imports increased year by year which shows that the demand is keeping up with the production. If the production of pecans ever become so great as to lower the price any way near the price of walnuts, that immense demand already created for the walnut will be switched to the pecan. Also bear in mind that we have the world for a market, as the pecan is produced nowhere in the world but America. As the production increases we must make greater efforts to keep the shelled nuts before the people by putting them up in fancy packages and well advertised so that they may be found in every candy store in the length and breadth of the land. Of course, this is not necessary at the present time, for the price of nuts is too high to encourage the use of them by the masses, but when the hundred of thousands

of acres of our pine lands become a forest of paper shell pecans and every village and hamlet will have its pecan warehouses, then and only then will we begin to see what the future of the pecan really is. There is a bright and shining light for those who plant now and in the future, but whom must we look to to keep this light trimmed and burning? The nurseryman.

Have we done our part in the past? Will we do our part in the future? Good trees, well grown, true to name, no seedlings for sale, the discouraging of cereplanting, and care of trees, poor location, etc., is our duty.

The value of all nuts imported into the United States in 1915 was \$12,987,285, and the total number of pounds was 70,174,227; so, my friends, you may have no fear of the future, either in regard to over-production or under-consumption, and with the statement that it will require all the enthusiasm and best efforts

of the optimists to produce enough of the paper shell pecan to supply unborn generations, I will leave the pecan question with you and say a few words about the Satsuma orange.

The Satsuma orange is scarcely known and has never been produced in sufficient quantities to become well-established in the markets, but it has become established in the desires of all who have sampled them, and the demand for them far exceeds the supply. The Satsuma differs from other oranges in methods of production and time of harvest so that it is an industry of its own and has to be handled along a line peculiar to itself. It is a fact that the farther north they can be grown and escape the frost, the better quality of fruit they produce; and below the frost line they are a failure. They are also a failure on rich, alluvial soil, even though the temperature is satisfactory, or in other words, our cut-over pine lands within one hundred miles of the coast, which are short of humus and nitrogen, is the ideal location for the production of this orange. There is no doubt some of you would like to ask if the Satsuma industry was not ruined in southern Alabama by the severe

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ISSUES LIST OF FARMS FOR SALE IN SOUTH GEORGIA

"Own a Level Farm," is the title of a very attractive descriptive pamphlet, giving a complete list of farms for sale along its line just issued by the Atlanta, Birmingham & Atlantic Railroad. This pamphlet contains a number of very pretty pictures of growing crops and it is intended to describe the diversity of crops grown in South Georgia, as well as to give anyone interested in investing in South Georgia farms lands an opportunity to investigate in advance the properties for sale in the fast developing communities served by that line.

A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

weather of last winter. I will anticipate this desire on your part and will say that the reverses of last winter were very serious and the loss fell very heavily on some, but otherwise it was a blessing in disguise for the following reasons: First, when the earlier plantings began to produce crops which brought from \$500.00 to \$1,000.00 per acre, it was like the discovery of gold in California or Alaska. Trees were planted by the thousands, in any and all places where they could secure a foundation, regardless of location and soil condition, drainage, air and water. What was the result? Unusual conditions resulting from what is known as our July storm and a very severe winter resulted in heavy loss. In spite of all this, we will have a remarkably fine crop in all orchards that had the advantage of favorable location. If you should visit Mobile, we can show you orchards of eight to ten years that have trees carrying 1500 to 2000 oranges at the present time. I heard one man say that his crop this year from five year old trees would pay the entire expense of producing the orchard.

How about the blessing in disguise? It is like this: We will go forward planting every available tree, and they will not be planted on low swamp lands or in low swales where there is no air or water drainage, and the results will be success with a big S

The harvest time of the Satsuma is November and December, at a time when there is very little competition. This assures a good market and the quality of the orange is the best advertisement of all.

Georgia will in the future be a great booster for the Satsumas grown within her borders. The eastern coast from Charleston, S. C., to the Florida line is adapted to the production of the Satsuma as also is the southern tier of counties in this state. The future of the Satsuma orange and paper shell pecan is in the hands of the people and it is up to them to make it a success or a failure. Success and failure are brothers. They travel side by side, and you may see their names written on the fences as you pass by.

Let us, as nurserymen, do what we can to exterminate failure.

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HEALTHY, WELL-GROWN NURSERY STOCK. STANDARD VARIETIES FOR SALE. REASONABLE PRICES. WRITE FOR PRICE LIST

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A number of fine 8 to 12 foot Budded Pecan Trees of the leading varieties; a number of 3 to 5 foot Budded Pecan Trees; 3,000 June Buds at big bargain.

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Waycross, Ga.

Jefferson County Pecan and Live Stock Company

Wholesale Growers of
Standard Varieties Grafted and Budded
PECAN TREES

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You will be pleased with our stock. We can fill orders for any amount of trees in all sizes and varieties.

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Season 1917-18

Will be pleased to book orders now for Grafted Pecans

No Seedlings
and for Price List

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Proprietor

Ocean Springs, Miss.

PECAN TREES

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as the best can
be grown...

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Fine
Pecan
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Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting; BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about best kinds; how to plant and care for them.

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Pecan Trees
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Other Citrus Trees

Also a general line of Fruit Trees, Shade Trees and Ornamental Shrubbery and Field Grown Rose Bushes. No better stock grown. Before placing your orders write for illustrated catalogue.

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Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

BECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

that success may reign supreme.

In conclusion, I will repeat that it will require all the enthusiasm and best efforts of the optimist to produce enough of either the paper shell pecan or the Satsuma orange to supply the unborn generations.

PERSONAL MENTIONN

R. Lloyd Scott, of Southern Alabama, a practical nurseryman and Satsuma orange specialist, is now located at Waycross and is connected with the Horticultural Service Company. This firm specializes in pecans and Satsuma orange operations and are equipped for handling top-working pecan trees and tree surgery.

C. D. Benfield, of Waycross, who has been prominent in pecan circles for the past six or eight years, died recently after a short illness. His work was of a practical character---planting and caring for orchards. Much of the work directed by the editor of The Nut-Grower was performed by him. The use of dynamite in tree planting was introduced by Mr. Benfield in his locality soon after it was recommended.

C. Forkert, of Ocean Springs, Miss., who has been conducting experiments in hybridizing pecans, suffered severely through storms and unfavorable weather which has detrimental to the pecan crop this year along the Gulf coast. Few people recognize the importance of the work he has been doing, and fewer still accord the support and encouragement that would lighten the burden he bears individually.

In his paper on the Ambrosia beetle, John B. Gill, of the Bureau of Entomology, absolves that insect from responsibility for injuring pecan trees. It seems that winter killing of trees in the lower south can be largely avoided by taking proper precautions. Mr. Gill's paper appeared in the October Nut-Grower.

Mr. Clyde Yarborough, of Tyler, Tex., a representative of the Woldert Grocery Co., paid The Nut-Grower a personal call recently. His firm is a large buyer of pecans and are known to our readers as owners of the Squirrel nut cracker. Mr. Yarborough was gathering data regard

ing crop conditions. He reports large yields for Texas and Mexico, but says that there will be no exports this year.

ITEMS OF INTEREST

A questionnaire as to the pecan crop in the southeast taken at the Waycross Pecan Conference worked out an average of 61 per cent for the 1917 crop yield.

The Georgia Horticultural Society will hold its annual meeting in Macon, Wednesday, Nov. 7. This is during the Georgia State Fair and reduced railroad rates from all parts of the state can be then obtained. Particulars regarding the meeting can be obtained from Prof. T. H. McHatten, secretary, Athens, Ga.

Importations of almonds from Spain will be large this season as the German and Austrian markets can not be supplied. It is supposed that there is a hold-over of 10,000 tons from the 1915 and 1916 crops, while the 1917 yield is estimated at 20,000 tons.

Reports from Texas indicate that some sections of the state have good crops of pecans, while other places have practically none

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PECAN GROVE five miles south of Milton, Fla., and fifteen miles southeast of Pensacola, one-half mile on east to East Bay, and one mile on west to Escambia Bay; 250 acres, all under good fence, soil fertile and tillable; 125 acres have been planted in soft-shell pecans five years old; good residence and barn, dry and healthy location.

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WRITE THE EDITOR
FOR PARTICULARS

THE NUT-GROWER COMPANY

WAYCROSS, GEORGIA

The average is estimated at 70 per cent of the normal crop.

The discovery of a remedy for a scale disease which has menaced the date palm industry in the southwest is announced. It is proposed to establish a quarantine to prevent the extension of the trouble into other territory.

The Almond Growers Association was obliged to withdraw all quotations for the 1917 crop within forty-eight hours on account of being oversold.

STATEMENT OF OWNERSHIP, MANAGEMENT, ETC., OF THE NUT-GROWER, PUBLISHED AT WAYCROSS, GA., AS REQUIRED BY ACT OF CONGRESS, AUGUST 24, 1912.

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M. A. Wilson, Waycross, Ga.

Charles N. Wilson, Waycross, Ga.

E. G. Wilson, Waycross, Ga.

H. C. White, Putney, Ga.

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Sworn to and subscribed before notary public, October 1, 1917.

J. F. WILSON, Editor.

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Cash for Pecans



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R. E. Funston Dried
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The Latest and Most Practical Hand Nut Cracker on the market for Pecans, Walnuts, Almonds, Filberts, etc.

The steady pressure makes it possible to crack the nut without crushing and to remove the kernel whole or in halves. Light and durable, very attractive.

To enjoy eating nuts you should have a cracker.

Price, 50 cents, Delivered

National Pecan Groves Co.,
Washington, D. C.

PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

VOLUME XVI

DECEMBER 1917

NUMBER 9



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food, *simple* pleasures, *simple*
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hard, play hard. Work. eat,
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Thomasville, Georgia



The Pecan Business

In a recent issue of THE NUT-GROWER, a point mentioned, from planting the nuts to gathering the nuts. Written from practical results, experience.

B. W. STONE :: Thomasville, Ga.

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their collection should know what they need. THE NUT-GROWER COMPANY, W.

HAS ANY STANDARD FRUIT INDUSTRY AS FEW DISEASES AND INSECT ENEMIES AS THE PECAN?

By T. H. GOSWAMI

There is a parallel between the pecan and the apple. The National Pecan Growers Association.

The parallel between those attacking the pecan and those attacking the apple is a parallel between those attacking the pecan and those attacking the apple.

Whoever is familiar with the habits of the pecan grower will recognize that the apple list contains the names of the most common pests and diseases of the apple. The parallel between those attacking the pecan and those attacking the apple is a parallel between those attacking the pecan and those attacking the apple.

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Drawer 176 Waycross, Ga.

(Continued on page 141)

THE NUT-GROWER

Volume XVI

WAYCROSS, GA., DECEMBER 1917

NO. 9

PLANTING AND CARE OF PECAN TREES

By H. P. STUCKEY

Read at the Waycross Pecan Conference.

THE pecan is a native American species. It is somewhat restricted in the area of its adaptability in this country, being confined largely to the lands of little elevation of the South and extending somewhat up the Mississippi valley.

Some of our pioneer nut growers starting commercial orchards fifteen and twenty years ago exercised sound judgment and considerable foresight in getting orchards well established before the cotton boll weevil reached this far east. It is not my purpose in this paper to urge upon any one to start a pecan orchard unless they are interested in the subject and have more or less natural inclinations towards the production of this crop; for it is human nature for anyone to direct their energies toward the line of their greatest interest. On the other hand, I want to stress very emphatically the importance of those who are going to start pecan orchards to start right at the beginning. We are sure to make some mistakes, even though we are extremely careful to work only in the light of the most approved methods; for the pecan industry is young yet and we have much to learn about the ins and outs of the game.

The pecan is not so limited in its geographical range as some of the early writers on the subject would lead us to believe. This nut will grow in practically all sections of Georgia outside of the more elevated or mountainous areas, though it seems to be better adapted to the southern half of the state, where the soils are loamy in nature and the elevation not great. A deep, fertile, porous, well-drained soil, not too dry, seems best for pecans. For a long time some of the most successful growers contended that the pecan would succeed only along water-courses, where the tap root of the trees could penetrate to water level. Recent experiences have shown that the pecan grows quite well on the broad stretches of sandy loam soil used so extensively for cotton growing in the southern half of Georgia. Trees planted on this soil are more pro-

lific and bear earlier than those grown on the deep alluvial soils of the river valleys.

We all cannot be commercial pecan growers, yet the most of us who own any land at all can have a few trees planted about our premises to make shade and produce enough nuts for home use. There is no particular secret about the process of planting a pecan tree. They are planted very similarly to the way other fruit trees and shade trees are planted. Yet they are less hardy and will stand less abuse than will most trees that we are accustomed to transplanting. For this reason, we must handle the young trees with extreme care and see that the roots are not allowed to dry out or be bruised excessively during the process of transplanting. We sometimes charge the nurseryman with sending us inferior trees, when, as a matter of fact, we do not properly handle them after they have been placed in our hands.

We do not recommend that the prospective pecan grower attempt to propagate his own trees; for it has been our observation that the amateur plant propagator rarely succeeds in budding or grafting the pecan. Unless one is quite skilled in budding or grafting pecans he will not find it profitable to bud or graft his own trees. One may be fairly successful in budding or grafting peaches or apples, and yet, when he attempts to extend it to the pecan, his percentage of "takes" or successes are so small that he gets enough trees to pay for only a part of his labor. If one wishes to bud the pecan for the experience, all good and well. But if he views the question from an economical standpoint, he can better afford to pay a reasonable price for his young trees than to attempt to propagate them at home.

It is now so well-known that seedlings do not come true in bearing that no argument is necessary to convince the intelligent tree grower of the fallacy of planting seedling pecan trees when they are to be grown for their yield of nuts. The very largest and finest specimens of pecan nuts may be

planted and yet the resultant seedlings are almost as liable to produce any other type of nut planted.

In our work with pecans at the Georgia Experiment Station, we found that the varieties easily fall into two distinct groups which bear a close relation to the problem of self-sterility or barrenness. These two groups are easily distinguished from each other by the floral characters of the catkins of staminate flowers and also by the difference in development of the pollen grains of the two groups. No detailed description of the two groups will be necessary in this connection, but suffice it to say that one group sheds its pollen at about the same time that the pistillate flowers become receptive, while for the others there is an interval of time, varying from one to several days, between the shedding of the pollen and the receptive stage. As will be readily seen, this has an important bearing upon the self-sterility of varieties. By properly grouping the varieties so as to have all late blooming varieties properly interspersed with the early blooming varieties, better pollination and thus better crops will be assured.

A little more than a year ago, we undertook to collect data showing the commercial varieties of pecans recommended for planting in the different sections of Georgia, as well as in sections of some other states. Our records show that two of our leading pecan growers from the vicinity of Waycross recommend for this section the Schley, Stuart, Delmas, Money-maker, Teche, Williams, J. A. Lott, Van Deman and Columbian. Unfortunately, our records do not show whether the Williams and the J. A. Lott are early or late bloomers. Of the other varieties mentioned, all are late bloomers except the Columbian (synonym, Rome) which is not generally recommended for commercial planting, and I must say that I doubt the advisability of planting it commercially in this section, even though it has been named. Unless the J. A. Lott or the Williams variety which the growers seem to prize in this vicinity are early bloomers, you will find it necessary to utilize some other varieties than those mentioned for planting in between to serve

as pollinators. The Alley and the Pabst both belong to the early-blooming group and are varieties well adapted to many sections of the state and would doubtless do well here to intersperse the plantings of the late bloomers.

In setting considerable areas to pecan trees, the distance they shall be planted apart, or the number per acre is an important matter. If there is any one correct distance, it has not been determined. However, about the best advice that we have to offer is for the beginner to follow the lead of the older and successful pecan growers. A great number of our more successful commercial growers are now planting trees twenty to the acre, giving a distance of a little more than forty-six feet apart. This distance is certainly none too great, as a large number of growers of older orchards are now beginning to realize. Thickly planted trees will give bigger crops for the first few years after the orchard reaches the bearing age, but the ultimate result is that the trees are overcrowded and begin to injure one another just at the time when they should begin to return the largest profits. We believe that it is far better to give the trees the full distance at the beginning and depend more upon the intercultural crops for orchard maintenance than to crowd the young trees with the view of getting heavy yields of nuts per acre early in the life of the orchard.

We are often asked the question, when or at what age will pecan trees reach the profitable bearing age. This question could not be answered even though we knew the exact amount of nuts a tree would bear at a given age, for the maintenance of no two orchards will be the same. Then, too, the price we get for nuts is too variable to estimate accurately. When the value or sale of the nuts exceeds the cost of the maintenance of the orchard, the orchard becomes profitable. Judging from the behavior of the variety pecan orchard set at the Georgia Experiment Station in January, 1908, we would say that it would give profitable returns, were it put on a commercial basis, about the eighth or ninth year after transplanting.

THE PECAN AS A FARM ADJUNCT

By J. B. WIGHT.

Read at the Waycross Pecan Conference.

THE one-crop farmer is financially dead. At one time he stood well in the South. His departure is not untimely. Few will wear black because he is gone.

Diversification is now the order of the day.

The farmer who has half a dozen crops from which his living is derived is, other things being equal, better off than he who has to depend upon a smaller number.

As a secondary crop, easily grown, requiring

little attention and of high food and monetary value, there is none which deserves greater consideration than the pecan. There are several reasons for this:

1. First and foremost is its monetary value. Last October I paid a farmer something over sixty dollars for the surplus product of eight pecan trees growing about his premises. When I handed him the check, he remarked that this was the easiest money he had ever made. And so it was, for the original cost of the trees and of the short time consumed in gathering the nuts was all the expense attached to their production. All over the pecan belt there are examples of where similar profits have been made. A farmer near Statesboro recently showed me a pecan tree growing in one corner of his yard from which he expects to gather this year not less than 500 pounds of nuts. This tree would be valuable if it did nothing more than add to the beauty of the home; but one valuable characteristic of the pecan is that it pays good rent for the space it occupies. Numerous cases known to the writer go to show that from ten to fifty trees set near the home will annually add from \$100 to \$500 to the family bank account. This is not a small matter to be thrown indifferently aside; for such an amount means to many a farmer the difference between success and failure.

2. There are few things less inviting than the home on which the summer sun beats down with no trees to break the force of its heat. Why use an oak or a hickory or a poplar or a sycamore for shade when a pecan is just as attractive and vigorous? Why plant for beauty alone, when beauty and utility can be combined? The pecan is unexcelled in this respect. There are many nooks and corners about every farm, and even most town homes, which when planted to pecans will contribute very materially to the beauty of the surroundings as well as to the support of the family.

3. Another advantage in the pecan is that it permanently enhances the value of the land on which it is grown. Recently a gentleman in South Georgia showed me a seedling pecan tree growing in one corner of his yard, which he had set out in 1888. He remarked that this tree added \$500.00 to the value of his home, because it paid from eight to ten per cent revenue on this valuation. Furthermore the past behavior of this tree had caused him to set out a small grove, which is already beginning to yield profits. And, still further, the pecan is a perennial, and not an annual that has to be planted every year. The above tree will, barring accidents, be living and bearing its crops of nuts for one hundred years after the present owner has gone to his reward. Personally, I know of noth-

ing that adds to the beauty and value of the home as a few pecan trees planted about the premises.

4. But the farm must be attractive if it is to live in the memories of those who are brought up there. One of the great defects of the farm is that it is too often lacking in those attractive features which make country life so desirable. Where is the boy who does not recall as among the most pleasant and distinct memories of his life, the old peach or apple orchard from which he gathered fruit when a barefoot boy? And the recollections of the old hickory and walnut trees, where he gathered nuts and watched the frisky squirrels, can never be effaced. The mulberry tree, among the branches of which I climbed when a boy, is one of the most distinct memories of my childhood. This is another point to be considered in planting pecan trees about the home. They add to the pleasure and permanent value of the home, and fix in the mind of the boy or girl brought up there, memories that will never be eradicated. If there were no other considerations, this alone would make the pecan of inestimable value.


With all the force of my nature, I would emphasize the value of pecans as a secondary crop, which should beautify and enhance the value of every farm in the cotton belt of the South. But because pecans are good does not mean that every available field and fence-corner about the farm should be filled with them. To thus multiply them will, in the great majority of cases, result in neglect; and neglect in any business is synonymous with failure.

Pecans are social creatures. They like company. Put them in favorable places about the yard and garden and barn, and they will repay ten-fold in money and in beauty the care and attention given them.

NATIONAL PECAN EXCHANGE

By W. P. BULLARD.

Read at the 1917 Convention of the National Nut Growers Association.

 At the October, 1914, annual convention of the National Nut Growers Association, Mr. C. E. Bassett, of the United States Office of Markets, discussing marketing problems, emphasized the warning to pecan growers not to make the mistake of organizing a co-operative selling association too soon. A private profit-making business may be begun as soon as a product appears, but not so with a co-operative, non-profit sharing organization which must depend for its support upon persons who in the main have felt the stinging pains of demoral-

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The Nut-Grower

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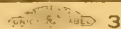
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3

Our office equipment has been reinforced by the addition of a new Squirrel nut cracker recently received from the Weldert Grocery Company, of Tyler, Tex.

The Waycross Chamber of Commerce took an active part in planning and carrying out the public service connected with the pecan conference held here some time ago. It is giving similar support to the new association which was one of the results of that conference.

Establishments for grading and curing pecans are likely to become the agencies for marketing the crops in the future. We see no reason why the nut cracking business cannot be handled to advantage at southern centers, rather than at points a thousand miles away from the source of supply.

Speaking of pecan clusters, a Schley tree in the city of Waycross is a star performer. This tree, at the early age of four years from the bud, produced a cluster of seventeen nuts, of which all but one were perfectly normal. The Horticultural Service Co., of this city will use wood from this tree, and will keep tab on the buds obtained from the limb which produced this cluster, with a view to noting the behavior of clusters grown from wood of such pedigree.

During the past few months we have given considerable attention to the winter killing of pecan trees, as damage from this source was unusually severe in the southeast during the winter of 1916-17. It would seem from a perusal of the article

furnished by the United States Bureau of Entomology, which appeared in our October issue, that the damage generally ascribed to the pin hole borer is attributable to the same source. There is ample reason to urge the cessation of cultivation in the pecan orchard not later than September 1, so that the trees will be thoroughly dormant by the time freezing weather arrives.

Mr. T. R. King, of Hope, Ark., sends us a sample of Columbian which is very well filled and of fine size. There is reason to believe that some localities furnish more favorable environments for this variety than others and our present information leads to the opinion that a heavy soil as far north as the 33 or 34 degree of latitude will give the best results. So this variety may yet be found to be available in sections where other and better varieties have failed to make good.

As a measure to help us in obtaining a thousand new subscribers, we will be glad to have our friends and patrons send us the names and addresses of person interested in nut culture who would find it to their advantage to become subscribers to The Nut-Grower. We will send to such persons sample copies and endeavor to enroll them among our readers. A few days ago a friend to whom we had rendered some slight service sent us a list of over four hundred names of people in a single state who are growing pecans. A good many of these names are already on our mailing list, but all the others will be given a chance to join our subscribers.

Pecan developments are gradually working into different lines as the non-resident owner of small tracts finds the overhead charges for care, cultivation and marketing absorbs a large percentage of his gross returns. Stock companies are all right for investors who cannot manage their own investments, if they are skillfully managed by honest directors. However, the ideal way is for the owner to live on his own farm and earn his living by growing live stock and farm crops while planting and bringing into bearing his orchard. A fifty acre farm, half of it devoted to pecans, makes a desirable and profitable business in a few years.

Seedling nuts of medium size which have plump kernels, good cracking quality and superior quality of kernel, are attracting more attention now than they formerly did, when size was all the

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rage. When such a tree is located, the owner of its bearing habits merits attention.

The severe cold which killed so many Satsuma orange trees and injured others last winter, also demonstrated that by proper method of cultivation and care, little and merely temporary loss need come to that industry. Planting will likely be larger than ever before this season in many sections.

NATIONAL PECAN EXCHANGE

(Continued from Page 134)

ized markets. As soon as a selling association is begun, some people expect great things of it, and expect that it will immediately handle all the nuts in the country excepting their own, which they think to hold out and sell themselves to advantage.

While the criticism that this exchange is begun too soon might have some force when considered from the mere standpoint of selling alone, yet when all the educational and fundamental problems are considered, it was not begun a day too soon. The question of grade standards, for instance, has required time for experiments and solution, and while grade sizes have been adopted for the leading varieties, yet even these may require adjustment to meet

the requirements of the market. Mr. C. A. Reed, of the Bureau of Plant Industry, has rendered valuable assistance in this behalf, but asserts that more laboratory investigation is as yet incomplete.

As the exchange is open, the cold wave came to help some one to see that a misrepresentation of the exchange was being made for the information of the uninformed, I beg leave to depart somewhat from the usual formalities and refer briefly to the general question of exchange. Inquiries come from the growers and nut dealers and ask, "What is the National Pecan Exchange?" It often seems to prevail that the Exchange is a dumping ground where the nut grower will drop with draft at his disposal. This is not the case. The Exchange is a cooperative organization, and the nuts are something for the grower to sell. The plan is this:

The grower is to locate at once a committee to plan the exchange, to grade and pack. Each grower is to contribute as much as he can to the exchange, and then the nuts are to be sold at the best price and the proceeds are to be divided among the growers. The nuts are to be sold at the best price and the proceeds are to be divided among the growers. The nuts are to be sold at the best price and the proceeds are to be divided among the growers.

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inefficient. When the packs of the several sub-exchanges are ready for the market, distribution is centralized through this exchange. The nuts are sold and distributed to the different markets to the best advantage, and the proceeds, less cost of operation, are paid to the different locals, which, in turn, make distribution to their several members. This, in brief, is the general outline of the California Walnut Growers Association, which has now progressed to the point where the year's crop is entirely sold in March preceding.

As the Exchange depends upon the co-operation of growers, the initial step must be to secure this co-operation; and co-operation means organization into locals, and the doing of this requires personal contact by a representative of the Exchange, and this requires funds. Moreover, such local organization cannot be effected until the production in a locality becomes adequate, otherwise the growers will not undertake the expense. The minimum cost of a complete plant is about \$1,000.

Early this year a certain locality that produced heavily last year expected to put in a large curing and grading plant but it later became apparent that this year's crop would be less than twenty-five per cent of last year's yield, hence that plan was abandoned. It will be taken up again when crop conditions justify and not before. Thus it can be seen that the Exchange cannot force things beyond natural conditions.

The older growers, with few exceptions, have gradually built up a sales output sufficient for their own requirements and these ordinarily will not be disturbed for a co-operative organization until price demoralization becomes imminent; and this condition, in large degree, exists in the pecan producing regions today; with the exception of isolated cases here and there, the growers have been able to dispose of their crops at fair prices in the past, and with a smaller yield in the Southeast this year and with the normally increasing demand the growers will be able this year to dispose of their crops at good and perhaps better prices than last year. Next year, as some think, the Georgia crop will be very large; and this, with the gradually increasing production over the entire country, may be the beginning of what has been sometimes termed the coming avalanche. Then the Exchange will find

its true place in the industry.

As to how soon the Exchange will reach this "true place" depends upon the growers, not only in financial support, but in offerings of available nuts to sell. Col. Van Duzee, in his report as president of the Exchange to the last November meeting of the National Nut Growers Association, stated that the Exchange would go forward just as rapidly as the growers would support it. At the October, 1915 convention of the National Nut Growers Association, a fund of more than \$5,000 was subscribed as a loan to establish the Exchange on a working basis and to be paid in installments from time to time as called. Calls totalling 30 per cent were made; a few responded very promptly, others only in part and many not at all. These responses were so discouraging and so manifestly inadequate to meet the needs of an aggressive campaign that no calls have been made and no salaries paid since last fall.

At the last annual meeting a few months ago, Col. Van Duzee refused on account of personal business interests to accept re-election, even to the Board of Directors, explaining that he would not have time to give it the proper attention. Soon after my election, it became apparent that the present crop of named varieties, taking the country over, would be smaller than last year and our financial condition and prospects being bad, it was decided by the board that the present activities must necessarily be limited to covering, among other things, the perfecting of grade standards, getting in touch with and perfecting lists of growers, and areas, varieties, crops, keeping in close touch as far as possible with brokers and marketing conditions, etc., in a word, such activities as might be carried on without paid service.

Within the next thirty days I shall be in California and while there will, at my own expense and on behalf of the Exchange, make a personal and close investigation of the successful walnut and almond growers associations and other successful co-operative marketing associations. While I have had extended correspondence with the very obliging managers of these associations, yet there is much that can be learned only by personal investigation, which I now propose to make.

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Along with general farming and stock raising the pecan is proving very profitable.

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"The Standard Railroad of
The South"

WILBUR McCOY, A. & I. Agt.
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the Exchange is at Albany, Ga., yet it is by no means a sectional enterprise. It is designed and will be operated, as far as my voice goes, to the benefit and in the interest of the entire pecan producing area of the country, the common interests of which demand fair and stable prices for nuts no matter where produced, quality alone making a difference, if any difference. The question of grades, for instance, must be solved so comprehensively that a final determination will be satisfactory to all producing areas. It is to this National Pecan Growers Exchange that the growers everywhere must look with confidence, that the interests of one locality are not made paramount to those of another.

The question of finances is at present paramount. There is about \$550 in the treasury. There are no salaries and no office and but little stenographic expense. Voluntary and gratuitous service begets no responsibility and produces small results as compared with paid and full service that does bring both responsibility and results. The Exchange must be put on the basis of paid and effective service.

This financial question will receive due consideration and a plan must be worked out so as to enable the Exchange the coming year to be a factor in the sale and distribution of pecan nuts as it was intended it should be, providing the crop is of such dimensions as to enable us to make a marketing beginning of any magnitude. Do not forget this: As long as growers can themselves sell their own crops to advantage, then they will not to any extent patronize any co-operative selling organization unless and until they see that price demoralization is imminent. This is an axiom of business that it is futile to attempt to over-turn. If the Exchange has to confine its sales department to small, isolated crops here and there, consisting of tree-run, mixed and ungraded varieties and seedlings, then its activities along sales lines will be limited. I say this, not in discouragement, but with a desire to record facts and to disillusion the man who thinks that as soon as a co-operative marketing association hangs out its shingle then all the growers (excepting himself) will rush pell-mell with offerings of support of both money and crops. The time is coming—likely to be here next year—looked at one time as if it were here this year—when the

combined support of large growers will in some way be given to the organization. The Exchange is organized on proper lines, was not started too soon, when all the fun and it not only can but will be made a successful and saving force to the pecan industry of the whole country. Without it, prices will ultimately

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A copy of this farm list may be had free of charge by writing to W. W. Croxton, General Passenger Agent, Room 613 Austell Building, Atlanta, Ga.

ly slump to a low level and market demoralization become complete. It is organized by and in the interests of the growers and is prepared to go forward just as fast as the growers are prepared to support it.

AS TO THE WILLIAMS PECAN Editor Nut-Grower:

In regard to the priority claim to the name "Williams" for the pecan I introduced, I will say that when this nut came into bearing in my grove in the fall of 1911 I sent specimens to Mr. C. A. Reed at Washington, asking his views respecting it. Its superior qualities became so evident to me that in 1914 I took specimens under the name of Williams to the National Nut Growers Association convention at Thomasville, Ga. I again presented specimens under this name at Albany in 1915. There I learned for the first time that Mr. Forkert had a nut of the same name. Mr. Reed told me at this meeting that my pecan had priority to the name, if I desired to retain it.

In the meantime, I had sold and given away buds and trees under this name and I thought it was but fair to those who bought them that I retain it. At the present time trees and buds have been sold from Florida to Texas. The Association, at Jacksonville, officially gave my pecan the name Williams.

I have the greatest respect for Mr. Forkert's enterprise in developing new varieties, and regardless of the name, should his pecan prove of superior merit, it will take its deserved rank among the varieties of pecans.

My own interest extends to the point whether my pecan is a better variety commercially than any other nut on the market. If it is not, then it is a dead failure, and it can be named Dennis as far as I am concerned.

My experience with nearly all varieties of pecans is that they are erratic and unreliable bearers. If this is true, then we need Mr. Forkert and other nut growers who will try to develop varieties that will take the crop out of this uncertainty and put it on a reasonably commercial basis. I believe the Williams pecan is such a nut. So far, in competition with other nuts none have proved its equal. We do not think a crop of twenty to fifty bushels of corn or wheat to the acre as an average crop is unreasonable, but a pecan grove that should produce an annual crop

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Monticello, Fla.

L. Majewski, Gen. Mgr.

of eight hundred to two thousand pounds of seed cotton in time would be an amazing thing. On thousand pounds of seed cotton, an oil plant, to the acre is a common thing, but I doubt if the most sanguine nut grower expects to reach an annual yield of a thousand pounds of nuts per acre.

We must remember that corn, wheat and cotton have had centuries of seed selection to bring them to their present perfection in bearing. In its early days of cultivation the cotton plant probably produced a pod of seed with a meager amount of lint. It was natural that the planter, ignorant then as he was, should have retained the pods for seed that contained the largest amount of lint, the product he desired, and so in the course of years a large part of the boll came to contain fiber.

The production of superior varieties of nuts is largely accidental, whether through Mr. Forkert's method of crossing two desirable strains, or merely planting one variety without knowing whence it is pollinated. In either case, any one of a thousand accidents may cause faults in the progeny. As a rule, the outcome is an inferior nut, but there is a chance of getting an improved variety, a chance that all ought to take in endeavoring to make a good thing better.

Two things are essential beside the quality of the intensive fertilization, for the pecan is a glutton for food; and a tree that has an annual bearing habit.

A seedling that matures early, bearing at six to eight years from the seed, and forms in clusters of four, five and more, is very apt to be a heavy and annual bearer.

The tendency to increase the distance in the orchard to sixty to one hundred feet is a mistake. Trees should be planted about forty-five feet apart. I have in mind a half-acre grove, planted about thirty feet apart, now twenty-five or thirty years old. This grove is sixty or seventy feet high, cathedral-like in appearance, the branches meeting and arching above, supporting each other. The pecan is a brittle wood and limbs heavily loaded with nuts are apt to break off especially when visited by a severe thunderstorm or a West Indian cyclone.

Concentrate trees upon the acreage: concentrate fertilization and cultivation, making it a veritable garden spot, and with an annual

bearing variety, I believe one can average a thousand pounds of nuts per acre after the trees are ten years old.

W. P. WILLIAMS.

Blackshear, Ga.

POINTERS FOR PECAN AND SATSUMA GROWERS

I am a fruit grower, my orchards being located at Grand Bay, Ala. On my farm, I have so far set out 490 pecan trees, covering 35 acres of land. Between the pecans, I have set out Satsuma orange trees. All of these trees have been planted in holes blasted with dynamite.

I started my planting a little over three years ago. The pecans were about three feet high and averaged 5-8 of an inch in diameter at the time of planting. My trees have shown a much more rapid growth and are in better condition than those of my neighbors who set their trees in spade dug holes. Some of my pecans showed five feet of growth the second year after planting.

I think a good many people make the mistake of blasting tree holes when their soil is too wet. As a consequence, they do not get good results and condemn the practice. Whenever I find it necessary to do any planting when the soil is too wet to pulverize well, I plant my trees in spade dug holes. Then a year after the planting I subsoil around them with dynamite.

Even when I plant the trees originally in blasted holes, I believe in subsoiling around them with dynamite every few years to keep the soil open and porous, to aid drainage, to give the roots easier work in going out into new feeding beds after plant food.

I trust my experience may be of some interest to your readers who are growing pecans and Satsumas.—J. F. Calhoun.

NEWS ITEMS

A well organized food exhibit was recently staged by the citizens of Stockbridge, Mass., in which nut preparations figured prominently. The exhibit was voted a success in every particular and is said to have aroused much interest.

The Coastal Plains Horticultural Association, which grew out of the Waycross Pecan Conference, will urge diversified and intensive farming in that section. Pecans, Satsuma

Pecan Trees, Orange Trees and Other Nursery Stock

100,000 Citrus Trifoliata seedlings, Georgia grown. The demand will undoubtedly exceed the supply. You should place your order at once. Write for prices.

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Large Pecan TREES

Surplus List of the Best Varieties

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PRICES

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SERVICE COMPANY**

Waycross,

Georgia

BOOKS AND CATALOGS

The Seed Reporter is a new publication by the Bureau of Markets of the United States Department of Agriculture.

The report of the College of Agriculture and Agricultural Experiment Station of the University of California for the year ending June 30, 1917, makes a neat pamphlet full of interesting information.

Proceedings of the 1917 Convention of the National Nut Growers Association, held at Biloxi, Miss., Oct. 10-12. 56 pages of papers, reports and dis-

cussions, with list of members. Price \$1.00 per copy. Can be obtained through The Nut Grower.

Bulletin 143 of the Georgia State College of Agriculture, Athens, Ga., describes the Short Courses for Farmers and Farm Women to be held in January 1918.

Important Pecan Insects and their Control, is issued as Farmers Bulletin No. 843. It is by John B. Gill, of the United States Department of Agriculture, and contains 48 illustrated pages. The case-bearer, shuck worm pecan weevil, bud moth, leaf case bearer, fall webworm and other insects are described and approved measures for control given.

The Committee on Resolutions at the Waycross Pecan Conference paid the following tribute to The Nut-Grower's publicity work:

"Resolved: That this convention heartily commends the most excellent service of The Nut-Grower in collecting and distributing information relative to nuts through specially prepared reprints. We believe that this service will do much toward developing the industry."

The Du Pont Company of Wilmington, Del., has just issued a very interesting booklet entitled "The Giant Laborer." It points out and proves the advantages of using Du Pont explosives for various agricultural and miscellaneous uses. It explains what benefit explosives have been in Land Clearing, Ditching, Drainage, Subsoiling, Tree Planting, Orchard Cultivation and other uses. It is a companion or sequel to "Handbook of Explosives," another recent booklet, the latter book containing full instructions as to how to handle and use explosives. Both books will be sent on application.

HAS ANY STANDARD FRUIT INDUSTRY AS FEW DISEASES AND INSECT ENEMIES AS THE PECAN?

(Continued from page 130)

therefore, do not fear for the future of the pecan business. The pecan is a close relative of the hickory and walnut, and for the most part has identically the same insect enemies. In the end, we expect the pecan to prove itself as hardy and immune from insect attack as its relatives."

Your program committee has doubtless intended that I expand my answer to the question it has submitted to me so as to compare the prev-

CORRECT INVESTMENTS IN PECANS

WE HAVE in our files various desirable pecan propositions which come to us from various sources. From these we can make selections to suit the requirements of our patrons

WRITE THE EDITOR
FOR PARTICULARS

**THE NUT-GROWER
COMPANY**

WAYCROSS, GEORGIA

alence of bacterial, fungous and physiological diseases of the principal orchard fruits with similar diseases affecting the pecan as well as to parallel the insect pests affecting them; also to outline what new knowledge has been gained in the 15-year interval since the publication of the bulletin to which I have referred. I cannot praise this list as fully complete regarding any of the standard fruits, for this is almost impossible, so rapidly are new troubles added to old ones; but, nevertheless, I believe I can give a fairly satisfactory comparison regarding the disease immunity of the pecan when compared with common fruit trees from the standpoint of the commercial and home planter, which is doubtless what your committee contemplated.

With a few additions which I shall specify, I shall accept the list of fungous, bacterial and physiological diseases given in the bulletin of Dr. J. W. Hardbarger of the University of Pennsylvania, published in 1917, as sufficiently complete for our purpose. This list became the basis of the list of the Commercial and Home Growers' Association of Economic Plants in the United States and Canada. I feel that we are obliged to rely on the Commission's descriptions of economic conditions and a few rather important lists of insects affecting some of the other fruits to furnish a comparison, if not complete, at least a fair one, of the insects affecting the principal orchard fruits.

The Apple and the Pecan Compared

First in importance among our orchard fruits is the apple. Wholly outside the insect world, Hardbarger lists 9 diseases for the fruit as against 9 for the pecan. Of the 47 diseases of the apple, 9 are bacteriological, 20 are fungous and 18 are physiological. 18 of the latter being different forms of winter injury. Of the pecan troubles, 8 are fungal and one bacterial, this latter being identical with the common one affecting the apple. To Dr. Hardbarger's list of pecan diseases I shall add the fungous trouble known as Black Arm (*Glomerangium*), being common, the physiological trouble known as the "Crown Borer" (*Agathidium*), and the physiological trouble of winter injury to the roots of the apple. The comparison stands, 47 diseases for the apple and 20 for the pecan.

None of the pecan diseases ap-

proaches the destructiveness of fireblight on apple—indeed it may be doubted whether all of them together can work one-half the damage that is sometimes wrought in an apple orchard by this one disease, if we compare the acreage of the apple and pecan to be equal. No known pecan disease is so little responsive to remedial measures as fireblight and there is none which spreads in such runaway fashion. Nearly all the pecan diseases are matched by apple diseases of similar severity and character, three in the lists being exact generic counterparts and one specifically identical. It is seen, therefore, that after fireblight is discarded and all the known diseases of the pecan have been matched by equally serious apple diseases, we have a remainder of about 26 apple troubles having no recorded counterparts on pecan. After making all reasonable allowance for ignorance of unrecorded maladies of the pecan, I believe I am justified in saying that it is much less susceptible to disease than apple and will require less doctoring and spraying to keep it healthy and productive. Dr. S. M. McMurran, at the meeting of this association in 1914, talked on "Serious Diseases of the Pecan and Their Control." After gently repudiating the form of subject assigned him, he enumerated about a half-dozen little maladies of the pecan and summed up his conclusion as follows: "It is evident that while local damage may result in certain cases, there is no serious menace to the industry from any of these things."

After centuries of development of the apple industry, plant pathologists are suggesting that it may be wise to begin over again and develop varieties which are resistant to fireblight. For more than a decade our pecan planters have been taking notes on the comparative ability of the different varieties to resist the more important diseases, and I am certain the varietal foundations of the pecan business are being more carefully and scientifically laid from the standpoint of disease immunity than were those of the apple industry. So far as known to me, varietal selection of the pecan has been largely in the direction of choosing those least susceptible to pecan scab.

Peach and Pecan Compared

Hardbarger lists 13 common diseases of the peach, just twice the number he lists for pecan. Among these is yellows, which simply wipes

the industry from the map unless diseased trees are diligently sought for and burned as fast as found. Leaf-curl and San Jose scale compel an annual dormant spraying, and curculio and brown rot compel two more sprayings after bloom, and the borers compel one or two wormings each year. The crown borer the lesser borer and the shot-hole borer are much greater threats to the peach business than any borers to the pecan industry. The curculio and rots, if left to their course, will destroy the peach fruit crop much more frequently than any neglected insects or diseases will destroy the pecan nut crop. Three to four sprayings a year and one or two wormings is the minimum requirement a peach orchard will tolerate from its owner and continue profitable. Dr. A. L. Quaintance is said to have stated that he has recorded more than 190 insect enemies of the peach, which is certainly more than anyone can enumerate for pecan.

The Pear and Pecan Compared

Hardbarger lists 14 common diseases for the pear, and a large proportion of the apple insects, besides some others, attack pear. Among

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PECAN LITERATURE

The increasing demand for information regarding the pecan has been so great that we have compiled a list of publications on this topic, which we can furnish, postpaid, at the prices named:

1. *The Cost of a Pecan Orchard*; by J. F. Wilson; a 12-page reprint of a paper read at the Cairo meeting of the Georgia-Florida Pecan Growers' Association in 1909. Price 10c, 12 copies \$1.00.

2. *The Pecan and Its Culture*; by H. H. Hume; a standard work covering every aspect of the business; topics conveniently arranged under different headings; 160 pages; illustrated; cloth. Price \$1.50.

3. *The Use of Nuts*; a book of nut recipes compiled by Mrs. Thomas A. Banning and her committee of ladies, under the auspices of the National Nut Growers' Association; 116 recipes; 50 pages. Price 25c.

4. Proceedings of the 1904 convention of the National Nut Growers' Association, held at St. Louis, Mo. A stenographic report containing a great variety of information. Illustrated with halftones of the original officers of the association. 124 pages. Price 25c.

5. Proceedings of the 1906 convention, held at Scranton, Miss. A full and interesting report of a largely attended meeting at a historic pecan center. 124 pages. Price 25c.

6. Proceedings of the 1907 convention, held at the Jamestown Exposition. One of the most complete volumes of the kind ever published. 112 pages. Price 25c.

7. Proceedings of the 1909 convention, held at Albany, Ga. All the formal papers and reports, with story of trip to the largest pecan orchards in the world. 68 pages. Price 25c.

8. Proceedings of the 1910 convention, held at Monticello, Fla. Gives stenographic report of discussions, with papers and reports of this intensely interesting and most important convention. Contains Judge Whipple's famous paper, "Why Pecans?" and a carefully prepared historical sketch of the association. 115 pages. Price 25c.

9. Proceedings of the 1913 convention, held at Houston, Tex. 90 pages. Price 50c.

10. Proceedings of the 1914 convention. 82 pages of closely printed matter, containing full stenographic report of the meeting. Price 50c.

11. Proceedings of the 1915 convention held at Albany, Ga. 100 pages, containing a full stenographic report of this large and important gathering; also list of members and several appendices. Price 50c.

12. *The Nut Culturist*; by Andrew S. Fuller; a treatise on the propagation, planting and cultivation of nut bearing trees and shrubs adapted to the climate of the United States, with names and description of edible or otherwise useful nuts known to commerce; 290 pages; illustrated; cloth. Price, \$1.50.

Reprints of selected articles from the THE NUT-GROWER, having great educational and advertising value, can be furnished in quantity. Write for titles and prices.

The Nut-Grower Company
WAYCROSS, GA.

The Nut-Grower

VOLUME XVII

MARCH, 1919

NUMBER 3



UR instruments, our hands, our hearts, are given us to work with in this time, to struggle with the evil, to bring out the good in this time, in order that people may look back in after days and say, "See what has come down to us from it; see what good has removed all the wrong which those who dwelt in it tell us of; see what there is in it to imitate."

—Frederick D. Maurice.

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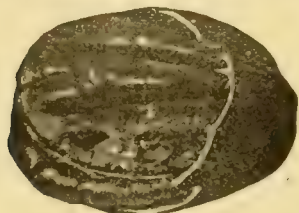
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* **SUMMIT NURSERIES** *
* Monticello, Fla. *

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The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

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Cairo, Ga.

* **WITH THE EDITOR** *

Mr. Forkert Renames Nut
Editor Nut-Grower:

I beg to advise of the following:
I was advised last July by Mr. C. A. Reed, government pecan expert that there was already a pecan named Williams. This, Mr. Reed, advised me, was named by Mr. Klingman, a Louisiana nurseryman, in 1912 after the party who grew the pecan in Shreveport, and, as Mr. Reed advises, this appears in Mr. Hume's book, The Pecan and Its Culture, 2nd edition. I am not in possession of a copy of this book, and Mr. Reed says he was never aware of it until some one pointed it out to him and advised to withdraw the name Williams and rename my cross-bred nut of Jewett and Success.

So I have given it the name of Eckert, after a young man with me who is a pecan enthusiast. I will add that the nut is a good one. The tree bore 30 pounds of nuts last season, all well filled, which sold at 60 cents per pound. With me it is better than the Schley, because more productive. I will say more of it when the young trees planted in orchard row of late come into bearing.

C. FORKERT.

Ocean Springs, Miss.

Glad To See Us.

Editor Nut-Grower:

The recent issue of The Nut-Grower just to hand and I am very glad to see it again. Do not let it drop out of sight. The pecan industry needs it and you.

You have been one of the old wheel horses in the pecan industry and many of us appreciate your industry and zeal in behalf of one of the best businesses on the face of the globe.

I enclose my dollar. I do not know how my subscription stands on your books, but if this does not put me in good standing then tell me what will.

Our National Pecan Growers Exchange has had a very successful year for a beginning and we will have much added strength next year. Our plan of marketing under brand name has been a winner, not only with the growers all over the country, but also with the trade. It is an unqualified success.

WM. P. BULLARD.

Albany, Ga.

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At our Nursery on the Newton Road,
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. 25,000 budded Pecan trees.
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PENN-GEORGIA NUT & FRUIT CO.
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Nuts, English Wal-
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PECAN TREES

**Our Specialty is
growing wellroot-
ed budded and
grafted trees of
best varieties.**

Careful attention given all orders.
Write for prices.

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Thomasville, :: Georgia

BUDDED PECANS

PRICES REASONABLE
FINE PEACH TREES 10 CENTS.
KIEFFER PEARS 10 CENTS. GET
CATALOGUE.

HARTWELL NURSERIES
Hartwell, Ga.

THE NUT-GROWER

Volume XVII

WAYCROSS, GA., MARCH, 1919

NO. 3

INTENSIVE VS. EXTENSIVE CULTIVATION OF PECANS

By C. A. Reed, Nut Culturist, Washington, D. C.

Read at the 1917 Convention of the National Nut Growers Association.

It is highly improbable that in naming this subject, the committee had any desire to array the interests of the "little fellow" against those of his big brother, or that it had any notion of having pointed out advantages of one scale over another, so overwhelming, that henceforth, all future planting would be on the favored scale. Certainly, there was not thought in the mind of the committee, in naming the topic, or in that of the writer in accepting it, of effecting a split between any two classes of pecan growers, for now that production on a large scale is becoming a reality, it is of the most vital importance that the growers be as perfectly agreed as to what's what as are the middlemen, who, unless deterred, will name the price of what the grower has to sell as complacently as they now name the prices of what he has to buy. Whatever the advantages may be of pecan growing on one scale over another, there must be no split in the ranks of the growers.

Except as most any discussion of pecan matters is fairly certain to develop new angles of interest, this subject, of itself, is not of great importance. No matter what may be the trend of the arguments brought out in either the paper or the discussion, the big fellow is not going to reduce his proportions one whit, nor is the little fellow going to change his *modus operandi* in the slightest degree. Each is going to continue in the future as in the past, precisely as though nothing had happened.

This subject has undoubtedly been crystallized as a result of a remarkable transition which has been taking place in pecandom during the last three years. From five to ten years ago, planting on a large scale was taking place at such rate that the nurseries were scarcely able to supply the demand for trees. About four years ago, this extensive planting began to fall off, and for a year or so, the tree trade was at a distressingly low ebb. However, during the last two years the demand has again been at highwater mark due to great numbers of orders from the little fellows.

Incidentally, this latter demand is coincident with the steps the South is everywhere taking in diversifying its crops and in becoming self sustain-

ing. In this latter direction, it is doubtful whether any more important step could be taken than by planting a few well-chosen nut trees about the home grounds or in the family orchard, for—did you ever think of it—nuts are the only vegetable product grown in this country on a large scale, which, as soon as mature, in the raw condition furnish a complete and highly edible, even though not well-balanced, food. In its ability to provide protein, fat, and carbohydrates, a properly-selected nut tree, when planted under favorable conditions, and given reasonable good care, may well be compared to a high-grade milch cow, a pig, or a flock of thrifty hens. So long as the nuts are consumed by the family, there is no question over packages for shipping, shipping charges, proximity to market, market prices, middlemen's profits, transit losses, storage charges, etc., etc., the producer and the consumer are the same.

We are told that it is from the stray trees in redeemed pockets on the steep mountain sides of Southern Europe that the bulk of our imported Spanish almonds, Italian chestnuts and Turkish filberts are obtained. In Northern Europe, the roadsides are utilized for fruit and nut trees and the proceeds are used in the upkeep of the roads. Clear salvage is what we would call these crops if raised here in like manner, yet some day we shall certainly come to that practice all over America. It is easy to comprehend that when we as a people begin to approach that degree of intensity in our agricultural methods, the individual orchardist will then follow methods of intensity which now are unknown, irrespective of the scale upon which he operates.

Coming back more directly to our subject, there must be due proportion in the elements which make up any successful whole. Thus, a profitable pecan venture must be made up of the following elements, and, probable of others, but certainly of these. Arranged in the form of an equation, we have:

Man plus toil, plus trees, plus varieties,
plus care, plus time, plus loss, plus crop,
plus market, equals credit at the bank.

(To be Continued.)

The Nut-Grower

Published monthly by The Nut-Grower Company

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



Experiments on pecan rosette, as published in a Department of Agriculture bulletin, indicate that this trouble is caused by a deficiency of humus in the soil with inadequate supplies of fertility and moisture. In knowing the cause, the application of suitable remedies corrects the trouble.

Fiber plants for the lower south is a line of new crop opportunities, which should be tried out in an experimental way to demonstrate how they can best be cultivated and handled. The world production of hard fiber used for binding twine is not keeping pace with the increasing demand.

One of the interesting features of a subsequent number of the Nut Grower will be an illustrated article which will appear in succeeding issues. Indications are that in a few months we can get back to the full number of pages we were able to handle before the war, and this will admit of the more generous use of illustrations.

A Georgia pecan grower has figured out that the annual production of pecans in the United States is about 500 cars of 25,000 pounds each. This would be something like an eighth of a pound each if equally distributed among our present population, or one nut once in six weeks. He thinks the bug-a-boo of over production is a long way off.

The value of trade advertising is one of the things that pecan growers and dealers will recognize sooner or later, as competition becomes more active in the present. Everything from a small seedling to a runt tree can now be readily sold by simply

showing them to some one, but the public will become more exacting, and then merit and publicity will win.

As seen by a letter from Mr. W. P. Bullard, of Albany, the first year's operation of the National Pecan Growers Exchange has been highly gratifying. We expect to have more particulars in later issues regarding this exchange for the successful marketing of the pecan crops is the biggest problem the grower faces. The officers who so systematically prepared for this co-operative agency are to be congratulated on the early success they have achieved.

In our new program of getting close to the actual farmers with not growing, the Nut Grower will have occasion in an early number to exploit our "Four Story Farm" program. We have been building the structure for years for the purpose of bridging the waiting period from planting the nut trees until they reach profitable bearing age. It works all right if the farmer himself works out the prescribed program and the bearing orchard comes along so easily that he has hardly felt the strain or even the delay.

Mr. J. B. Wright in his new edition of questions and answers regarding the pecan has the following to say about care and patience—two very important and essential features, which if neglected will lead surely to disappointment. Possibly no other two essentials have been neglected to the extent that these have and hardly a defective orchard can be found in which one or the other of these have compromised if not defeated the desired results.

"With the proper exercise of care and patience, there are handsome profits in pecan growing. The field is more promising than any other in agriculture or horticulture, of which I have any knowledge; but if quick profits must be had, let pecans alone. If slipshod methods are to be followed, better raise cotton or corn or razor-back hogs.

"To the person who is willing to exercise care in the selection and setting of trees, who will give them proper cultural attention, and who is willing to wait a few years for results, there is no more profitable investment than a grove of pecans.

SATSUMA ORANGES IN GEORGIA.

In this article we assume that the Satsuma orange can be grown to advantage in the Coastal Plains of Georgia, but admit that it is not cultivated to the extent that entitles it to be regarded as a commercial product.

It is a geographical fact that Georgia is nearer the great markets for oranges than any other

state now growing them, while her facilities for direct shipments, both by rail and water are not equalled by the present source of supply.

All the glowing tributes paid to the golden fruit by writers, poets, artists, advertising experts—and consumers as well—apply aptly to Satsumas when grown on Georgia soil. The charm of romance and tradition with which the celestial nations have for centuries invested this variety furnishes the highest possible recommendation.

When propagate don hardy deciduous stock, the Satsuma finds in the soil and climate of South Georgia conditions better suited to its requirements than those of a more tropical climate or irrigated soil.

These considerations make it a remarkably attractive proposition for the horticulturist and the commercial fruit grower. Add to these considerations the information that the Satsuma tree enjoys the distinction of being thornless, and that the seedless fruit ripens in advance in other localities, it seems to have grounds for claiming a monopoly of the market just at a time when prices and demand are most attractive.

It is well known that the Satsuma matures and is marketable in advance of its showing the characteristic color, while growers living below the southern boundary of Georgia are not permitted to ship oranges out of their state until a prescribed amount of color is developed by natural means.

One other point of advantage offered by Georgia soil for growing this delectable fruit, and then we will consider other features of the proposition. This final argument—or opportunity, rather—is however, subject to change, as various circumstances may determine. This is the present low value placed on lands in Georgia as compared with other orange producing states.

It is not our purpose to discuss details of the various points we have mentioned. This can come later and from others, as we are not yet ready to begin aggressive and extensive planting. Suitable trees are not yet grown in Georgia except to a very limited extent. Owing to the presence of citrus canker in much of the orange territory in adjoining states, the nurserymen there are not permitted, except to a limited extent to ship trees out of the state. Also our people have to be properly guided and shown how to handle the proposition, which is new to us as a commercial venture, and the supply of specialists in this line is not at present in keeping with the opportunities. The nurseryman must lead the way, produce the stock and direct the planting and cultivation until professional horticulturists can gain a livelihood in our territory.

Aside from the pecan nurseries in the Coastal Plains of Georgia there are but few general nur-

series and the section so known embraces over half of the state's area. It is a veritable paradise for the tree pedler and stock in great quantities is shipped in from all directions, though there is ample evidence to show that the section should, on account of peculiar advantages, be exporting rather than importing nursery stock. Thus we reach the conclusion that the skilled nurseryman is the key to a great fruit-growing interest in general and to the Satsuma orange in particular in our Coastal Plains section:

We are quite willing to admit that there are many reasons advanced which are regarded as proving that the Satsuma orange is not suited to Georgia climate, but in the face of such arguments the trees are here in bearing and have been for at least ten years. It is true that thousands of trees have been killed by the cold, but the same can be said of Florida and of farther west along the coast. We admit also that the white fly and other insects and diseases are destroying many trees, but the same thing would happen elsewhere under the same treatment, or rather, the lack of proper treatment.

It is said that the trees do not grow well and soon dies. We know this to be true to a certain extent, but we have learned the reasons why and now know the remedy. Because one or more of the varieties of the Satsuma group are inferior in quality to the typical and genuine Satsuma, may account for the unfavorable opinion sometimes expressed regarding the merits of the fruit while the same reason may account to a large extent for unsatisfactory bearing.

With all these handicaps, and before we found means of overcoming them, we found ample reason for advocating the planting of this fruit. It was as an interplanting in young pecan orchards that first engaged the attention of the writer, and in this way came his practical experience with the Satsuma.

In the light of recent research, the Satsuma may be regarded as a group rather than as a single variety. At least three different oranges have been propagated and sold indiscriminately as Satsumas. A practical understanding as to the relative merits of these will simplify the matter of making a right start.

With first class trees of known and desirable pedigree, properly planted on suitable soil, the start has only been made. Then comes the proper and intensive cultivation, with fertility added to the land to suit the well-known requirements of the trees, this cultivation be discontinued at the proper time, so as to have well-ripened and mature wood before the advent of freezing weather. The owner can then confidently count upon crops of surprising value even within the space of three years.

As an advertising medium, The Nut-Grower pays those who have attractive offerings in the line the publication represents.

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and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over

your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES
THE NUT SPECIALIST
Lancaster, Pa.

Horticulture

A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

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HORTICULTURE
PUBLISHING COMPANY

147 Summer Street
Boston, Massachusetts

Glad to See The Nut-Grower

Editor Nut-Grower:

I am very glad once more to see a copy of The Nut-Grower. I enclose one dollar for my yearly subscription. I do not know just how we do stand. One thing I do know, I like your paper. I learn something from it.

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Eleven acres at Orange Park, 12 miles South of Jacksonville. Four acres planted to Pecan trees three to eight years old.

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PECAN ROSETTE IN RELATION TO SOIL DEFICIENCIES

By S. H. McMurran.

The newness of the pecan industry, the rapidity with which it has spread over a wide territory, and the general lack of knowledge of the tree's requirements have led to the planting of many orchards and portions of orchards in situations that are totally unsuited to the production of healthy trees. A large proportion of the cases of rosette in the southeast are due to such planting. While it is entirely possible to reclaim practically all of them, and develop healthy trees from the diseased ones, it will probably not be profitable to do so in many cases. On deep sand, clay underlain with sand and on badly washed hill-sides the difficulty and expense of sufficiently increasing and maintaining the soil fertility will be such that it is hard to see any justification in attempting it, especially in view of the fact that vast areas of suitable pecan lands at reasonable prices are available.

On the other hand, where the disease is present on soils which are readily susceptible of permanent improvement, it would probably be cheaper and more profitable to build up such soils and thus develop healthy bearing trees rather than to replant in a new location.

The matter is thus seen to be one of soil deficiency, and the answer to the pecan rosette problem is very evidently "soil improvement." In proportion as the soils in the orchard are made to approach the condition of those found in the native habitat of the pecan in humus and plant-food content and in water-holding capacity, the disease may be expected to decrease and eventually to become reduced to a negligible factor.

THE BLACK HICKORY OR WALNUT CATERPILLAR

This is a large, dark-colored caterpillar coated with long, gray hairs. It occurs on pecan, hickory and related plants, lives in large colonies, and when about to shed their skins, which they do several times, the caterpillars leave the branches on which they have been feeding and frequently congregate on the trunk, often near the base, in large, ball-like clusters held together with silken threads. In the south they are commonly known as webworms. It is well to know the early stages of this insect, the better to be prepared for it and to control it.

PECAN TREES

As GOOD as can be grown

And as CHEAP
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

The young caterpillar is reddish with dark stripes, and it is not until it is nearly mature that it changes to black. It attains a length of fully two inches.

The knowledge of the habit of this species of clustering on the trunks of the trees infected gives us an easy method for its control. It may be killed in the same manner as the fall webworm, by means of a kerosene torch. Arsenicals are valuable for the earlier stages of the pest, and the trees should be frequently sprayed while this insect is present.

NUT RECIPES

Nut Roast.

Take cooked beans or peas, pass through a colander to remove the skins, mix with an equal quantity of finely chopped nut meats and season to taste. Line an oiled baking dish with half the mixture and spread on a dressing made as follows: Take four slices of zweibach, pour over them boiling water and cover; let stand a few minutes, then break up with a fork, add a half cup of sweet cream and add salt and sage to taste. Cover the dressing with the remainder of the nut mixture, pour over all one half cup of cream and bake for one and a half hours. Serve in slices with cranberry sauce and garnish with a sprig of green.

For flavoring and confectionery purposes the pistachio nut is most valuable. The tree is a native of Syria and while the nut now grown in California and the Gulf states is larger than the Syrian variety it is not so finely flavored. The kernel is also prized for its dainty green coloring.

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The Nut-Grower

VOLUME XVII

JANUARY 1919

NUMBER 1



DURING the months following the entrance of the United States into the world war, labor and other conditions became such that it was impracticable to keep up the regular issues of The Nut-Grower. With the advent of peace we resume regular numbers, with a reduced number of pages for the present, and will continue to serve the industry in a broader way as new conditions and our years of experience make possible.

While relaxing nothing of our fidelity to the pecan, the importance of the walnut and other nut trees as food and timber resources will have particular attention for all sections of the country. Marketing of nut products will as the year goes by be a department that will become increasingly valuable.

Our subscription list will necessarily conform to the postoffice regulations but all expiration dates will be extended to cover the months in which no issues were mailed.

With grateful acknowledgments for the years of support and generous expressions of appreciation, we enter the new era in the world's history with confidence and determination, asking only for co-operation and support which will make the service we render of national interest and permanent value.

Respectfully,

J. F. WILSON,
Editor.

10c per Copy

\$1.00 per Year

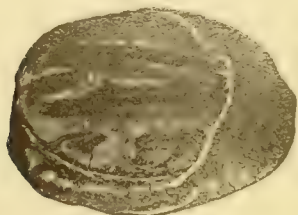
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* **WITH THE EDITOR** *

Free copy of the Nut-Grower will be given to any new or old subscriber who will send in three new subscriptions at the same time at the regular price.

A new era has begun. Whatever of inspiring prospect we formerly enjoyed, the future now is luminous and we have learned how to be brave and courageous, whatever may interpose to cloud the prospect.

Good resolutions should be promptly put into execution. Many people have been resolving to plant pecan trees from year to year, who do not plant the trees, and time continues to pass, while the man who plants besides resolving to plant soon has something to show.

The compliments and sincere congratulations of this season of all others of peace and good will is our message to the thousands of friends and readers, whom we trust, welcome back to their homes and desks the long delayed Nut Grower. Twelve numbers were missed and the 1918 issues can only stand as a reminder that during this eventful period the world war for freedom was fought out and won.

It is like getting back from a long and perilous journey to again take up the interrupted labor of love and enjoy the peaceful pursuits of horticultural life. But things are different in some intangible way and the future always so roseate when nut culture was the dominant interest, now takes on the more stern aspect of a responsibility in supplying a staple food for the nations of the world.

With the new start we make with the new year we will conform closely to the restrictions now in force regarding the use of second class postage which now restricts within well defined limits our use of free copies as well as requires our removing from the mailing list when the arrearages reach their limitation. One of the gratifying features of the enforced absence of issues was the persistence of many subscribers in renewing whether they received copies or not, so that we now have names on our books that are paid in advance for two or three years. Owing to the break, all expiration dates have been extended one year, but the wrappers enclosing this number were prepared long ago so that, when indicated, the date is not correct. It will require some time to make the corrections.

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FINE PEACH TREES 10 CENTS.
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THE NUT-GROWER

Volume XVII

WAYCROSS, GA., JANUARY 1919

NO. 1

THE PROPER PLACE OF NUT TREES IN THE PLANTING PROGRAM

By C. A. REED

Read at the 1917 Convention of the National Nut Growers Association

IN THE planting of trees for most purposes, it is now possible to exercise practically the same degree of choice with regard to special fitness as is employed in the selection of men for positions or tools for a piece of work. The fruit grower in every part of the country has his special species and pomological varieties from which to choose. The foresters and landscape gardeners have their species and botanical varieties or improved strains to pick from.

Among the important purposes for which trees are planted, the production of native nuts is singularly behind. The leading species of native nut-bearing trees include the hickories, the walnuts, the chestnuts, the pines and the beech. Of these, one of the hickories, the pecan, is the only species which has so far been developed by cultivation to become of importance for the production of an orchard product.

The timber of the pecan is less valuable than is that of most other hickories and is in commercial use only as second-class material. However, it is the most important species of nut bearing tree in the United States. Its native and introduced range includes the fertile lands of the plains of practically the entire southeastern quarter of the country. It is neither an upland nor a wet land tree. In the United States it is not found in the mountainous sections, nor, to any important extent, south of middle Florida. In Mexico it is occasionally found on mountain sides at considerable elevations and by some is supposed to be there indigenous. However, according to "Pomological Possibilities of Texas," written by Gilbert Onderdonk, of Nursery, Tex., and published by the State Department of Agriculture in 1911, its success at those altitudes is vitally dependent upon the water supply. In each case investigated by Mr. Onderdonk, while upon official trips made for the United

States Department of Agriculture, he found the pecan trees to be adjacent to some stream, either natural or artificial. "At Bustamente," says Mr. Onderdonk, "one hundred and seven miles beyond Laredo, are pecan trees two hundred years old that have been watered all their lives and have continued productive. From these trees grown from Texas pecans, pecan culture has been extended until there are now thousands of thrifty pecan trees under irrigation. One owner of a small lot sold his water right when his trees were about seventy-five years old, and when the writer visited his grounds fourteen years later, every one of his trees was either dead or dying."

We may yet find the pecan to be suitable for plateau or mountain land growth, but as Mr. Onderdonk reports was the case in Mexico, it is also the case here: the species must have ample water. With the proper amount of moisture, neither too much nor yet too little, there is no way of predicting to what altitudes or even latitudes it may be taken. Its northernmost points of native range are near Davenport, Ia., and Terre Haute, Ind. Iowa seed planted at South Haven, Mich., on the eastern shore of Lake Michigan at a latitude of about 42 1-2 degrees have never been seriously affected by winter temperatures. However, they have fruited but little. So far as the writer can ascertain, the crops of nuts from the native trees in the bottoms north quantity and character. Dr. Deming reports a large tree at Hartford, Conn., at a latitude of nearly 42 degrees, which was then three feet or more in diameter and quite at home, so far as growth was concerned.

Other planted trees are fairly numerous along the Atlantic coast between Washington and New York. There is one in the southern part of Lancaster county, Pa., near Colemanville, but so far as is known to the United States Department of Ag-

riculture, important crops of nuts have never been realized from any of these northern trees. Crops of nuts from the native trees in the bottoms north of latitude 39 degrees, or approximately that of Washington, D. C., and Vincennes, Ind., are fairly uncertain. Northern nurserymen are now disseminating promising varieties of pecans from what has come to be known as the "Indiana District," which includes the southwestern part of that state, northwestern Kentucky and southwestern Illinois. In many respects these varieties compare very favorably with the so-called "paper shells" of the Southern States. They are believed to be of very great promise for northern planting in sections to which they may be adapted. However, before any northern varieties are planted for commercial (orchard) purposes, they should be fully tested as to their adaptability in the particular section where the planting is to take place. The commercial propagation of northern varieties of pecans began less than ten years ago. The first attempts were not generally successful; and as a result there are no budded or grafted trees of northern varieties yet of bearing age.

With very few exceptions, there are no named pomological varieties of any other native nut now being propagated. So far as these exceptions are concerned, it is probable that fewer than one hundred budded or grafted trees of such varieties are yet of bearing age, and of such as have attained the age at which fruit might be expected, exceedingly few have borne in paying quantities for any number of consecutive years. Therefore, with reference to the planting of native nut species for profit, the truth of the situation is simply this: In the ordinary course of events, with the exception of the pecan, years of experimentation in the testing of varieties and in a study of their cultural requirements must be gone through before any native species of nut-bearing trees can be planted in any of the northern states with a certainty of commercial return from nuts alone which would be comparable with that of many other crops which already are upon a well established commercial basis in this part of the country.

With reference to two of the foreign species of nuts which have been introduced, the situation is quite different. In order of commercial importance of the nuts now grown in this country, two foreign species, the Persian (English) walnut and the almond stand second and third, respectively, the pecan, which is an American species only, being first. With these exceptions, the foreign introductions are all in the experimental or test stage, and while possibly the European hazel (filbert) may now be making a strong bid for commercial recognition in the northwest, and the pistache in parts of California,

neither species can yet be recommended for general planting.

With the exception of a few hardshell varieties of almonds which are practically as hardy as the peach and which are suitable only for home planting, as they are in no way to be compared with the almond of commerce, there is now no indication that this species is destined ever to become of commercial importance east of the Rocky Mountains.

The Persian or so-called English walnut is of commercial importance in this country only in the far Western States. In the South, it has thus far failed altogether. In the North and East it has held out gleams of hope, first bright then dull, for more than a century. There is no way of telling the number of trees of this specie which have been planted in the northeastern section of the country but let us imagine it to have been sixty thousand. Of these fully fifty per cent have succumbed to climatic conditions; twenty-five per cent have been but semi-hardy, and possibly twenty-five per cent have attained the bearing age. A part of each of the last two classes have borne crops of commercial size for a number of years. Some have produced nuts of good size and quality. A great many of all these surviving are now proving susceptible to a walnut blight upon which Mr. McMurrin is to report upon tomorrow. A liberal estimate of the present number of Persian walnut trees in this part of the country would be ten per cent of the original supposed sixty thousand or six thousand trees. Of these, the writer has positive knowledge of none which are now bearing crops of nuts in such quantity, and of such size, and quality and with such regularity and which have so borne for such length of time as to encourage commercial planting. Few of the eastern grown nuts are so free from tannin as to be really pleasing to the taste or favorably comparable with the best nuts of the market. The writer is now closely watching the best known varieties which the nurserymen are putting out, but at the present time there is no variety which in his judgment should be commercially planted without further testing.

The proper place for such partially improved species, as are most of the hardy nut producers in this section at the present time, is that in which they may be used for more than the single purpose of nut production. Most of the species of the botanical family, *Juglandaceae* to which the walnuts and hickories belong, are slow growers, and as such, are objectionable to the average planter. In answer to this, it may be said that among trees, slowness of growth is invariably associated with longevity of tree and its value when cut as timber. Also, when due pains are taken, it is possible to select species which are exceedingly satisfactory in the

landscape. Several of the slides which are to follow illustrate the individual beauty of selected nut trees and some show their effective use in the landscape.

Foresters are now advocating the planting of trees in waste places in the country, especially about farm buildings. There are, perhaps, no conspicuous waste places with a greater aggregate area than the strips along the public highway. In certain foreign countries, these strips are planted to fruit trees and the right of harvest awarded to the highest bidder. The revenue so obtained goes a long way toward keeping the highways in good condition. It is possible that this practice may sometime be introduced into the United States, but until public opinion is radically changed, the planting of fruit trees along the highways can not be expected to yield any satisfactory returns to the public. The experience of Dr. Morris who planted cherry trees along the public road past his farm here in Connecticut where we have just been is typical of what under present conditions might be expected in any part of the country. When the cherries were ripe, automobile parties came for many miles to pick the fruit, and when that in the highway was gone, the cherries from the nearby orchard were taken. In both cases, the branches were broken down and the trees left in badly mangled condition. Dr. Morris then tried nursery-grown and expensive evergreens, but on Sundays, automobile parties came again with spades and shovels and dug up the trees.

The ratio of population to tillable land in this country is not such that, for a long time to come, the American people as a whole will be pressed into the using of highway land for the production of crops or into respecting the right of the public to harvest such crops as might be grown in its highways. Therefore, for the present, except in densely populated or in more than ordinarily well regulated communities, it would be useless to advocate the planting of ordinary fruit trees along the public roadways.

Irrespective of the possible value of their crops, fruit trees of most species are both too small and too short-lived to be suitable for highway planting. With nut trees, the situation is entirely different. The native walnuts, most species of hickories and the American beech are large-growing and long-lived trees. In addition, they are capable of withstanding severe temperatures; they are tough and strong and are not liable to injury by storm or while being climbed by ordinary persons; and they readily adapt themselves to a wide range of soil, moisture and climatic conditions.

Ordinary species of nut trees cannot be recommended for the dual purpose of timber and nut production, as, for the former purpose, the trees

should be planted close together in order to induce length and straightness of trunk with a minimum of top or bearing surface, while for the latter, they should be planted in the open and given space for the maximum development of bearing surface and a minimum length of trunk. The great demand for hickory in the making of axles, wheels and other vehicle parts and handles for tools, and for walnut in the manufacture of furniture and gun stocks makes it not only possible but common practice to use these woods in short lengths. Therefore, both species planted along the highways and in other waste places might profitably be converted into timber upon reaching maturity, if their crops of nuts should prove to be of small commercial value.

The butternut, *J. Cinerea*, is a less symmetrical grower than are the black walnuts. The timber is less valuable and the nuts are cracked with greater difficulty, it is the most hardy of any native species of Juglans. Its kernels are rich in quality and of a flavor more pleasing to some persons than that of any other nut. Cracking the native butternut and marketing the kernels affords the rural people in many sections a fairly profitably means of employment during the winter months. Its native range extends farther north than does that of either the eastern black walnut, or that of the shagbark hickory, *Hicory ovata*, and is considerably beyond that of the shellbark hickory, *H. lacinoisa*. Therefore, in view of its hardiness, and the merit of its kernels, it is well worthy of consideration for planting in the most northern parts of the country.

Were it not for the blight which is now making practically a clean sweep of destruction over the eastern states, wherever the native chestnut is found, the American chestnut, *Castanea dentata*, would certainly be entitled to leading consideration as a highway, an ornamental or a nut producing tree. Unaffected by blight or other disease, it is one of the largest-growing and most graceful species in the eastern United States. The European chestnut is nearly as susceptible to this blight as is the American species. The chestnuts from eastern Asia now appear to be sufficiently immune to offer a practical solution to the situation by their introduction into this country. However, they commonly lack the sweet agreeable flavor of the American species and need hybridizing in order to improve their quality. This, the Federal Department of Agriculture is now doing, and in due time, there may be something to offer in ample quantity which will make a satisfactory substitute for the native species. Exclusive of the Asiatic species and the government hybrids, there are now no available species which can be recommended for planting in the blight affected area, and these should be planted only for test purposes.

The Nut-Grower

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



In these times of stress, we cannot always do the things necessary as promptly as desired. In common with many publishers the difficulties of getting out on time are unsurmountable. We simply have to do the best we can and keep on doing it until times become normal.

Establishments for the grading and curing of pecans are likely to become the agencies for marketing the crops in future. We see no reason why the nut cracking business cannot be handled to advantage at southern centers rather than a thousand miles away from the source of supply.

We are adopting a new policy for enlarging our subscription list as well as for handling renewals. It costs money to work up new business as well as to retain patronage. This necessary expenditure we propose paying to our friends and helpers who will form clubs and handle renewals in their neighborhood. Particulars regarding this will be found in a later issue.

The Coastal Plains Horticultural Association which grew out of the Waycross Pecan Conference will work for diversified and intensive farming in that territory. Pecans, Satsuma oranges, onions and other products suited to the local conditions of soil and climate will have attention both in the production and selling of such products. Plans contemplate county and community auxiliary organizations for making the work effective and profitable.

The Nut Grower is a service agency and the printing and distributing of the issues is an incident,

or convenience rather, for carrying into effect a great public proposition. Those who regard it as but a paper in competition with others for the profit of the owners have another guess coming. Our mission is to serve, rather than to sell paper and ink. Viewed from this angle we are earning big dividends in profits to our patrons while the coin of the realm that comes to us barely pays the expenses incident to the publication.

An Alabama subscriber speaks of The Nut Grower as a "most helpful and interesting periodical." The letter also says, "my trees give every indication of a heavy crop for 1918." Incidentally we happen to know that this appreciative subscriber was living in a northern city when first enrolled; that the orchard and change of residence followed several years ago, and that several very encouraging crops of fine nuts of standard varieties have already been gathered. We like the missionary idea as illustrated by our Arkansas subscriber, in his letter which appeared in the last issue. We will be glad to have about five hundred of our subscribers follow Mr. McKinnon's example. Just a kind word about the Nut Grower to your neighbors and friends interested in the pecan will work out advantages to all concerned. We want a thousand new subscribers, and there are several thousand interested people who will be obliged for being connected up with the information and inspiration The Nut Grower furnishes.

It is really surprising the number of pecan trees which were grown from nuts, planted years before the art of propagating had become generally known and practiced, that are failing to produce satisfactory returns to the owners. People are prone to give little or no attention to the behavior of trees and take for granted how much or how little the return as all that should be expected. But this is not the case. Where trees are known to be poor bearers, or bearers of poor fruit, the only remedy to bring about more satisfactory returns is the transformation by top-working to varieties of known quality and fruitage. If you do not know whether or not you are getting value received from your grove, we can show you methods that will answer the question beyond a reasonable doubt. If you do know, then why delay the day when you will be receiving a good return, not alone in dollars and cents, but in the satisfaction that comes to the owner of every profitable grove. Have those trees top worked at the first opportunity. If you are not satisfied with returns from other fruit trees, let us go over the situation with you and remedy the trouble.

As an advertising medium, The Nut-Grower pays those who have attractive offerings in the line the publication represents.

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and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES

THE NUT SPECIALIST
Lancaster, Pa.

Horticulture

A Magazine of Trade News and Information

For the Nurseryman, Florist, Seedsman and Gardener. A reliable exponent of advanced Trade and Progressive Horticulture.

PUBLISHED WEEKLY
Subscription \$1 per Year

HORTICULTURE
PUBLISHING COMPANY

147 Summer Street
Boston, Massachusetts

The J. A. Lott Orchard

While many observing people acknowledge that there are commercial probabilities in pecan culture, and others regard it as being a pleasant romance, still others who have never seen Missouri have to be shown with graphic demonstrations before they will acknowledge, much less believe the most convincing testimony.

It is our purpose to give several brief stories from time to time as to actual accomplishments by men living in various sections of the south. In this initial story, Mr. J. A. Lott, of Waycross, furnishes the data used. While these results seem incredible to the ordinary business man the fact remains that orchards now being planted are far superior in yielding earlier and more abundant crops of better varieties than the earlier planted orchards are producing. Mr. Lott's crop of pecans for this year aggregated 7,200 pounds, which sold at an average of 26½ cents a pound, ranging from 20 to 28 cents, owing to size and variety. The entire crop, except-

ed for his own use, was readily disposing what was given away and reserved of and the checks in payment are in evidence.

At the average price his crop brought him some over \$1,900.00. Five thousand six hundred pounds of the crop was produced by his four acre grove within the city limits. The balance of 1,600 pounds came from a young grove near town. This city orchard originally had 121 trees. Some were removed to make room for the residence he now occupies. Other trees did not show good bearing habits and they are being top-worked to improve varieties. This reduced the number of trees which produced the 5,600 pounds to sixty-eight trees, which really occupy but little over half of the orchard area, and means a crop value of over seven hundred dollars per acre for the 1917 crop for the bearing trees. Now these sixty-eight trees only produced an average of 83 pounds per tree while such trees as are now being planted double and treble this average yield at the age of these profitable ones. Thus a city lot planted in pecans is a good investment.

WILL BUY FIVE OR TEN acres Patterson & Taylor orchards, East or West of Flint River. Give price and terms. Reply "H," care Nut Grower.

BUDDED and GRAFTED PECAN TREES

We have our usual quantity of strong, thrifty trees; quality the best.

Let us quote on your wants.

Florida Nurseries

• W. W. Bassett
MONTICELLO, FLA.

Profits from Pecans

Because some men have made a success in growing pecans, it does not follow that all who have engaged in the business have found it profitable. However, it is the possibilities of the industry that we wish to bring to public attention, and in turn eliminate the errors that ill-advised and spasmodic efforts which compromise the profitable results. There is nothing in the way of success but mis-directed energies. Good trees of any standard variety, properly planted on suitable soil, and subsequent care and cultivation, will do the job, provided the planter is willing to await profits until the trees reach profitable bearing, which comes in from six to eight years, owing to variety planted.

In illustration of profits the following incident is given of results right here in Waycross, which can be certified by one interested. George R. Youmans, on Carswell avenue, has several trees in bearing, from which he gathered twelve bushels as his 1917 crop. Forty pounds make a bushel, so any one can figure out how many pounds he had, as well as compute his profits at any actual or fictitious price per pound. Two of these trees, according to Dr. Ben Williams,

PECAN TREES

As GOOD as can be grown

And as **CHEAP**
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

Grafted Pecan Trees of Select Standard Varieties

NOT THE MOST—
ONLY THE BEST

Bayview Pecan Nursery

C. FORKERT, Proprietor

Ocean Springs :: Mississippi

PECAN TREES FOR SALE

Leading varieties, grafted stock. Pecan orchards and wood from older cut-back trees is my specialty.

WRITE ME FOR PRICES

L. E. CHASE

OCEAN SPRINGS
MISS.



Fine
Pecan
Trees

And Fine Orchards
Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting: BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about the best kind; how to plant and care for them.

Inter-State Nurseries C. M. Griffing & Co.,
Macclenny, Florida

PECAN TREES

BUDDED PAPER SHELLS

Best Varieties

Expert Propagation

Healthy and Hardy Stock

T. H. PARKER, Moultrie, Ga.

are about fourteen years old. These two trees are what is known widely as the Van Deman variety. The wholesale prices this season for this variety is 45 cents per pound. The trees produced six bushels or 240 pounds, which, at the price mentioned, amounts to \$54.00 per tree. Orchard practice is to grow twenty trees to the acre. This figured out something over a thousand dollars per acre for one crop, and would show a property valuation of at least ten thousand dollars, since it yields 10 per cent on that valuation per acre.

These are only ordinary trees such as any one can grow by starting right and staying on the job. Besides they began bearing in three years from the time set out. Add to this the fact that this nut is a most valuable food product, and that the planting of an orchard pitches the crop for successive generations to harvest establishes its claim to wide attention.

Can Pecan Orchards be Sprayed?

No one who has seen the park spraying outfits of our larger cities in action or even the power sprayers in fruit orchards will doubt the possibility of spraying with liquids even the oldest orchards of large trees. The modern dusting machines look still more practical for covering quickly well-grown trees in pecan orchards. Orchards of trees not more than 60 feet high can now be covered with spray or dust more easily and quickly than orange or apple orchards could be sprayed 20 years ago.

What's the matter with the pecan orchard? If treated right, it will be all right.

The benne is a greatly improved black walnut tree very vigorous. Nuts very large and well flavored. For streets and avenues it has no equal. A plantation of these and other black walnuts would bring handsome returns within a period of twenty years for the fine lumber they furnish, to say nothing of the nuts. Make a gold mine out of your waste bottom lands by planting them to walnuts. Our fine walnut forests are well nigh exterminated by the hand of the agriculturist and the lumberman and now the exporter to foreign veneer factories is completing the destruction. Moral—plant walnut timber belts.

Clubs of ten or more subscribers will be enrolled at 30 per cent discount from regular price.

WITH THE EDITOR

The Nut-Grower

VOLUME XVII

FEBRUARY, 1919

NUMBER 2



GOOD LUCK will carry a man over a ditch, if he jumps well; and will put a bit of bacon in the pot if he looks after his garden and pigs. Luck taps at least once in a lifetime at everybody's door, but if industry does not open it, away it goes.

—Charles Haddon Spurgeon.

10c per Copy

\$1.00 per Year

FOR SALE

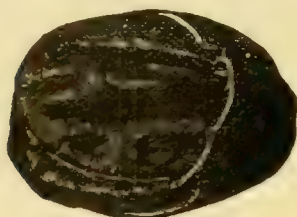
Propagating wood of standard varieties of pecans, in large quantities. Budwood and scions held in cold storage upon request. Price dependent on quantity desired. Correspondence invited.

J. R. OLIVIER,
St. Martinville, La.

For Sale—Back numbers of The Nut-Grower. Parties desiring to complete their files should send list of what they need. THE NUT-GROWER COMPANY, Waycross, Ga. tf

* **BUDDED AND** *
* **GRAFTED PECANS** *
* **WHOLESALE AND RETAIL** *
* Standard varieties guaranteed *
* in every respect. *
* Get in touch with us before *
* placing your next order. *
* **SUMMIT NURSERIES** *
* Monticello, Fla. *

SUCCESS



Natural Size

The nut that has never failed to bear and never failed to fill at both ends with kernels of the best quality.

ECHTEL PECAN NURSERIES

OCEAN SPRINGS, MISS.

Best Budded Pecan Trees

We have them in great quantity as well as quality. Our stock is especially strong and well-rooted. We have also best budding wood.

Magnolia Nursery

W. C. JONES, Proprietor
Successor to Wight & Jones

Cairo, Ga.

THE NUT-GROWER

***** * **WITH THE EDITOR** * *****

Clubs of ten or more subscribers will be enrolled at 20 per cent discount from regular price.

Free copy of The Nut-Grower will be given to any new or old subscriber who will send in three new subscriptions at the same time, at the regular price.

Get four of your neighbors to join you, making a club of five. These names sent in at one time with four dollars reduces the price to each subscriber 20 per cent.

Agents who make a systematic business of handling subscriptions, and who send in during any twelve months period twenty-five or more subscriptions, will be allowed a liberal discount.

It is so easy for the well established and reliable pecan nurseries to sell their products regularly each year that they frequently cut down their appropriations for advertising. This looks like good business policy, but in effect it deprives the publications which have been popularizing the industry of the support which enables them to serve the public as their direct patrons.

We are adopting a new policy for enlarging our subscription list, as well as for handling renewals. It costs money to work up new business as well as to retain patronage. This necessary expenditure we propose paying to our friends and helpers who will form clubs and handle renewals in their neighborhood. Particulars regarding this will be found in a later issue.

One of the strong points of The Nut-Grower is the Personal Service department which gives attention to the particular needs of our patrons. All kinds of special and often highly important information is distributed each month privately in answer to letters which come from all parts of the country. This service is free to our subscribers. While we do not know everything about nut culture we happen to know enough about it to connect all enquirers with sources from which any available information is obtainable.

FOR SALE CHEAP

At our Nursery on the Newton Road,
Albany, Georgia,
25,000 budded Pecan trees.
Apply to Nursery or to
PENN-GEORGIA NUT & FRUIT CO.
611 Reformed Church Building,
Philadelphia, Pa.

WHOLESALE GROWERS OF

GRAFTED AND BUDDED PECAN TREES

Simpson Nursery Co.
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ROOD PECAN GROVES

Albany, Ga.

Pecan Trees, Pecan
Nuts, English Wal-
nut Trees

Write for Prices

C. M. Rood, President

PECAN TREES

Our Specialty is
growing wellroot-
ed budded and
grafted trees of
best varieties.

Careful attention given all orders.
Write for prices.

**SOUTHERN NUT
TREE NURSERIES**

Thomasville, :: Georgia

BUDDED PECANS

PRICES REASONABLE
FINE PEACH TREES 10 CENTS.
KIEFFER PEARS 10 CENTS. GET
CATALOGUE.

HARTWELL NURSERIES
Hartwell, Ga.

THE NUT-GROWER

Volume XVII

WAYCROSS, GA., FEBRUARY, 1919

NO. 2

WINTER AND SUMMER CROPS FOR PECANS

By HERBERT C. WHITE

Putney, Ga.

The subject of winter crops in pecan orchards is one involving so many factors and upon which there is so much diversity of opinion that it is with some hesitancy that I offer the following remarks.

The great variability of soils, both surface and underlying, upon which pecans have been planted, topography, rainfall and how distributed, previous cropping, humus content and mechanical condition are all necessary factors to be considered in determining what one can afford to plant as an inter-crop, always bearing in mind that the trees are the first consideration.

The matter of growing crops among pecan trees is, or should be, simply a question of the maintenance and improvement of soil fertility and the maximum conservation of moisture at all times. We have only to remember that numerous experiments have proved that it takes from three hundred to five hundred tons of water to produce one ton of vegetable matter. In one case it was found that it required one thousand tons of water per acre to produce two tons of oats hay. This is equivalent to about nine inches of rainfall.

The average annual rainfall in the pecan growing portions of Georgia, Florida, Alabama, Mississippi, North and South Carolina and Louisiana is ample, both for pecans and inter-crops, but the distribution of the rainfall during the year is in most cases very irregular and uncertain. Were we sure that during a certain portion of the year we would have a definite quantity of rain we could plan our inter-crops accordingly without running any risk whatever of either trees or inter-crops suffering. This is where irrigation would solve many problems.

It is, however, certain that we must have humus in our soils, and there are only two ways of getting it, either by hauling organic matter, or by producing it on the soil. The first method is almost out of the question, therefore we must plant crops to get the necessary humus and trust to nature or Providence to supply enough moisture for the trees and crops. If crops are taken from the land and not re-

turned in the form of manure, then these inter-crops should be fertilized sufficiently to compensate for the plant food removed from the land. The soil then has not been robbed, but is benefited by the humus in those parts of the plants not removed. If this is done any farm crop may be planted except rye, oats, barley or wheat.

I have had personal experience with hairy vetch, Canada field peas, burr clover, crimson clover, oats and rye as winter crops and I have abandoned all winter crops. To get the best results with any of these, they should be planted earlier in the winter than it is possible to do on account of other crops being in the field and nut gathering. Further, the proper preparation of the land is equivalent to vigorously cultivating the trees at a time when they need no stimulation and should not be stimulated. It delays the maturing of the wood and invites winter injury.

As a matter of fact, none of the crops I have named reach their full maturity for weeks after the orchard needs cultivating and make their greatest drafts on soil moisture at the time pecans are putting out and during the period of blooming. Again, it has frequently occurred that the ground is so hard when these winter crops should be turned under that it is impossible to plow. With a dry winter or early spring any of these crops will utilize so much water that the soil will be left entirely too dry for the welfare of the budding and blooming trees. The hairy vetch is in full bloom toward the end of May. About the same time burr clover is ripening seed. Canada peas were blooming the third week in April the year I tried them. In those plots where I have allowed any and all of the above-named crops to mature, the trees most plainly showed the effects by small, yellow leaves and small nuts the same season. On the other hand, where there were heavy growths of the clovers vetch and Canada peas the trees were greatly benefitted the following year and were pictures of health. The great addition of

(Continued on Page 5.)

The Nut-Grower

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No receipts for subscription remittances will be forwarded unless return postage is enclosed. The label on wrapper is a receipt and indicates when subscription expires.

Advertisements

Advertisements of responsible parties and firms solicited. Medical advertising not accepted. Rates furnished on application.

Forms close on 20th of month preceding date of publication.



The planting of trees and shrubs and the growing of trees and flowers should not be regarded as non-essentials, but as necessary to our highest development.

Of the three different pecans which have received favorable and deserved publicity under the name "Williams," one has been given a new name. The Success and Jewett cross developed by Mr. C. Forkert of Ocean Springs, Miss., will in the future be known as "Egbert." This nut was named by The Nut-Grower several years ago after the late J. Williams, of Alabama. Mr. Forkert's story regarding it will appear in an early number of this publication.

One of the pecan varieties that is steadily gaining in public favor is the Delmas. While it may not have any distinguishing character, still it combines so many desirable qualities, not only of the tree but of nut also, that it has made substantial progress. It is now being planted more largely with each succeeding year in sections where it is believed to be suited to local conditions. It has already become a conspicuous feature in exhibits of nuts on account of the number of growers who have it on display, as well as on account of its being a good exhibition nut.

The past season was not favorable for the holding of nut growers conventions. The war interfered, the Spanish influenza interfered and everybody was too busy. Besides all this the secretaries of both the National and the Northern Nut Growers Associations went into army life. The local meet-

ings, also were as a rule, postponed, but now that we see the end of the war several grand reunions will doubtless be arranged for the fall of the present year.

We hear much about co-operation these days. There is a phase of co-operation that might be classified as "team-work" that we think can be utilized by the pecan grower who has small to medium sized crops to handle. The Nut-Grower has been yoked up with various movements aside from publishing general information and helping to establish orchards and new problems are continually arising in marketing the increasing crops to advantage. The Pecan Growers League, working as selling agent, is doing team work for its members in giving the advantages of co-operative selling of pecans among the isolated and small producers who do not have the advantages of car-lot handling of their product.

A CHANGE IN OUR POLICY

During the past sixteen years The Nut-Grower has been a distinctively horticultural publication devoted to the industry its name suggest, specializing on the pecan. These have been eventful years, rich in experience and wonderful in achievements by way of laying the foundations for an abiding industry for we have learned that the production of food is the first essential in our national existence. That the pecan will figure conspicuously in this line in years to come, both directly and indirectly, is a foregone conclusion.

Recent years, however, have changed the current as to the production of pecans. The commercial orchards will continue to be all and more than thus far developed when well managed, but will sooner or later be overshadowed by the magnitude of production on southern farms, where trees are being planted around the home place and extended to orchards of considerable size. This is the logical and most economical way to produce pecans.

Thus it becomes proper that the character of The Nut-Grower should conform closely to the change in conditions which it has aided in bringing about, so from now on our policy will be to devote merited attention to the farm interests which are so closely allied with the horticultural problems involved in successful operations.

This leads to a new subscription program which will include the farmers of the lower south as well as others horticulturally inclined, while the former policy of relying solely on nut interests for advertising patronage will be extended to embrace live stock farm implements, seeds and similar lines in which the farmer and horticulturist are interested.

WINTER AND SUMMER CROPS.

(Continued from Page 3.)

humus and nitrogen, plus the increased water-holding capacity of the soil greatly helped the trees.

It is a question, then, whether we can afford to treat our orchards in this way every two or three years or the winter following a heavy crop of nuts, so that if the size of the nuts is affected it will affect a comparatively lesser crop, on the assumption that a heavy crop is followed by a smaller one, which theory, however, I am not at present willing to concede.

The planting of winter crops must, therefore, be decided by each person, bearing in mind the above facts. For the reasons above given I consider the planting of oats, rye, barley or wheat unwise, as you may not be able to plow them under at the proper time and the temptation to let them mature seed is too great.

With regard to summer crops we are also up against the water question in dry times, but we must take our chances. Without a winter crop we start our summer crop under more favorable conditions, as we have the full benefit of the water stored in the soil. By proper cultivation we can conserve much of this water, taking a few lessons from the methods used in the semi-arid regions where fine crops are made with less than a third of our rainfall and where it has happened that no rain has fallen from the planting of the seed until harvest time. It is doubtful, however, if pecans can be grown under these circumstances.

To get maximum benefits from summer crops legumes are, of course, the best particularly so where the whole plant is turned under or fed to live stock in the field. Where cut for hay some plant food is taken from the soil, but the stubble and roots probably fully compensate for it on lands needing nitrogen, and most do. I have found that even legumes where planted too thickly and too close to trees will affect the growth of the trees and the size of the nuts in a dry year. My experience in this connection was gained three years ago when I planted an orchard very heavily with China beans, which is the rankest grower of all the velvet bean family and uses an immense amount of water. The following year I planted the Yokohama variety, which is not such a rank grower and notwithstanding several drouths, the trees grew better and the nuts were normal.

In my opinion, the ideal crops for the summer are those which require plenty of cultivation up to about the first of August, and while many of us plant peas and velvet beans broadcast, it would be better, if possible, to plant them in rows and cul-

tivate the mtwo or three times or as long as farm tools can be used. The vines would sooner or later lap in the rows. The vines make a much heavier growth if cultivated, grass and weeds are largely eliminated and all that can be done to conserve moisture is done. If suitably fertilized, I think peanuts make a desirable summer crop, but it must be remembered that practically the whole plant is taken from the field and less is left in the soil after harvesting than in the case of cowpeas when cut for hay. It is obviously sound reasoning to suggest that such mineral elements as are totally removed from the soil both in the roots and tops of peanuts, should be furnished. This, of course, applies to all crops but with some we retain for the soil large compensating advantages in the way of humus. While corn is a gross feeder and takes much water, yet the crop is laid by early enough to enable the growth of weeds and grass to come late in the season, furnishing humus and at the same time tending to slow up the growth of trees toward the late summer. Beggarweed and cowpeas planted in the corn in July will make a good growth by fall. I have had no experietee with alfalfa in a pecan orchard, and on principles do not believe it would be desirable. Bermuda grass is great handicap and should not be tolerated in a pecan orchard.

The cover crop feature is one which greatly simplifies itself as the trees get older, for it is only a question of ten or fifteen years when nothing can be planted profitably except peas and beans. Among ten year trees planted 46 feet, 8 inches apart it is impossible to make a satisfactory corn crop. One or two rows in the middles may make some corn, but you will notice a well-defined area considerably beyond the radius of the branches of the trees where the corn is worthless and will barely grow. This also applies to cotton, but in my judgment we can ruin the soil for trees quicker with cotton than with anything else. The necessary clean cultivation in a year or two will denude the soil of all humus and the reason some of our orchards are not better today is because the soil is deprived of all humus by continuous cropping with cotton and no scientific crop rotation plan followed.

In conclusion I would say that were it not for the fact that several years must elapse before a pecan grove is profitable, the ideal treatment would be to turn every crop under at the right moment and even plow up and sacrifice an inter-crop when weather conditions for the trees and crops combined are unfavorable or to graze the crop off with live stock. The first suggestion is impossible, as it would make the cost prohibitive, while the second suggestion is feasible and practical and appears to be a safe and profitable course to those who are following it.

As an advertising medium, The Nut-Grower pays those who have attractive offerings in the line the publication represents.

BUDDED AND GRAFTED ENGLISH WALNUT

and other nut trees adapted to the middle belt and northern planting? Catalog free.

Why Not Bud and Graft Over your seedling black walnuts, butternuts and Japan walnuts to the improved English walnuts and your hickories to fine pecans and shagbarks? Complete instructions for doing this work free.

Jones' Patch Budder

is now used by the U. S. Government, many experiment stations and by the leading propagators of nut trees, both north and south. This little tool doubles your capacity and your efficiency.

J. F. JONES
THE NUT SPECIALIST
Lancaster, Pa.

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PUBLISHED WEEKLY
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HORTICULTURE
PUBLISHING COMPANY

147 Summer Street
Boston, Massachusetts

DYNAMITE—THE TREE DOCTOR, NURSE, EXECUTIONER AND UNDERTAKER

By N. D. Rand, New York.

The coincidence that dynamite should be the doctor, nurse, executioner and undertaker was made apparent while engaged in some agricultural blasting on a large farm. First, Miss Dynamite was ushered in to prepare the bed for some baby trees. She did her part well and

gave the youngsters a good start in life. Close by was a sickly orchard which needed attention. I called in Dr. Dynamite who prescribed, not a change of climate, but plenty of food and water by subsoiling so the patient was accordingly rejuvenated. Next, a vigorous old criminal stood in the way. He had been condemned several times, but had never been cut down, because that would leave the stump which would be just as much in the way as the tree. Executioner Dynamite soon laid him low. Just beyond a number of stumps told of some old patriarchs. Here is where Undertaker Dynamite had the last say, for he laid them out good, and they were soon soaring heavenward.

The native black walnuts and butternuts have a most delicious flavor and combine with other things well in cooking; but the hard shell makes them difficult to crack. However, they are worth while when one is not pressed for time; or the work of cracking them and removing the meats can be relegated to the boys of the family, who like to feel that they are of some help, although I know this is contrary to the usual opinion held by adults.

The Benge is a greatly improved Black Walnut. Tree very vigorous. Nuts very large and well flavored. For streets and avenues it has no equal. A plantation of these and other Black Walnuts would bring handsome returns within a period of twenty years for the fine lumber they furnish, to say nothing of the nuts. Make a gold mine out of your waste bottom lands by planting them to Walnuts. Our fine Walnut forests are well nigh exterminated by the hand of the agriculturist and the lumberman, and now the exporter to foreign veneer factories is completing the destruction. Moral—plant Walnut timber-belts.

Walnut trees in California are planted about fifty feet apart and by the time they reach the age of 12 or 14 years usually cover all the intervening space. The trees put forth their catkins (or blossoms) and the nuts begin to form during March and April, and there is no prettier sight than a full bearing orchard from that time until harvest.

Florida Home For Sale

Eleven acres at Orange Park, 12 miles South of Jacksonville. Four acres planted to Pecan trees three to eight years old.

If interested write for particulars to the owner,

JOHN C. McCORMICK,
191 Bethune Avenue, West,
Detroit, Mich.

WILL BUY FIVE OR TEN acres Patterson & Taylor orchards, East or West of Flint River. Give price and terms. Reply "H," care Nut Grower.

BUDDED and GRAFTED PECAN TREES

We have our usual quantity of strong, thrifty trees; quality the best.

Let us quote on your wants.

Florida Nurseries
W. W. Bassett
MONTICELLO, FLA.

PECAN TREES

As GOOD as can be grown

And as **CHEAP**
as the best can
be grown...

J. B. WIGHT, Cairo, Ga.

NEWS ITEMS.

Mr. Willard G. Bixby, of Brooklyn, New York, is now Secretary of the Northern Nut-Growers Association.

As another planting season arrives the planting of medium to large size trees grows in favor. This is indicated by nurserymen already being short of trees of the five to six feet grade, while having both larger and smaller grades to offer.

Mr. W. F. Clark, of Jacksonville, Fla., has a fine 30-acre orchard of eight-year old pecan trees at Orange Park, Fla. Last season he used a compost made of fish heads, leaf mold, stable, cow and hog manure with such evident benefit that he expects to continue the treatment.

Mr. W. W. Bassett, of Monticello, Fla., the well known pecan nurseryman, succeeded Mr. A. S. Perry, of Cuthbert, Ga., as secretary of the National Nut-Growers Association, while the latter is overseas.

Mr. R. L. Price, of Junction, Texas, who owns the original Llano pecan tree, is disappointed in yield for 1918, as it yielded only 80 pounds. Any tree that produces as good a nut as the Llano is a good proposition with half that much of a crop. Our recommendation was that he plant more trees of the variety.

Club Subscriptions.

Get four of your neighbors to join you, making a club of five. These names sent in at one time with Four Dollars reduces the price to each subscriber 20 per cent.

Representatives Wanted

In Georgia and many sections of the
Southeastern States.

The Atlanta Georgian and Sunday American desire to secure the services of representative men who own automobile to cover rural routes. Please give reference in making application. If you are the man we are looking for send application today to the

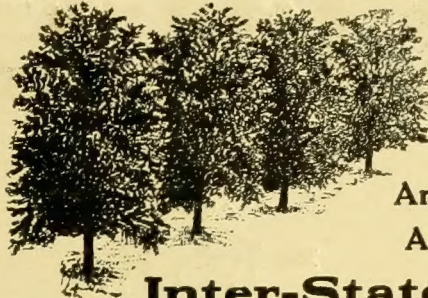
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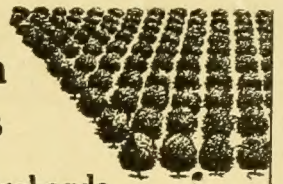
PECAN TREES FOR SALE

Leading varieties, grafted stock. Pecan orchards and wood from older cut-back trees my specialty.

WRITE ME FOR PRICES

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MISS.

Fine Pecan Trees



And Fine Orchards
Are Grown From

Inter-State Nursery Trees

Five recognized best pecans for the farm or commercial planting: BRADLEY, CURTIS, PRESIDENT, SCHLEY, STUART and other leading varieties.

Our system of growing, digging and handling pecan trees insures success.

Diversify your planting with other nut and fruit trees. Our catalog tells about the best kind; how to plant and care for them.

Inter-State Nurseries C. M. Griffing & Co.,
Macclenny, Florida

PECAN TREES

BUDDED PAPER SHELLS

Best Varieties

Expert Propagation

Healthy and Hardy Stock

T. H. PARKER, Moultrie, Ga.

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